THE

SURGICAL WORKS

OF

JOHN ABERNETHY, F.R.S.
&c. &c. &c.

VOLUME THE FIRST.

ON THE CONSTITUTIONAL ORIGIN AND TREATMENT OF LOCAL DISEASES;
ANEURISM; DISEASES RESEMBLING SYPHILIS;
AND DISEASES OF THE URETHRA.

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PREFACE.

THE best mode of obtaining and extending medical and surgical knowledge is, in my opinion, to pay that strict attention to diseases, which qualifies us to note even the slighter shades of difference that distinguish them from each other. Such discrimination leads us to form some regular arrangement of them, which, even if it be not correct, may ultimately enable us to discover their natural series and order. This method I have pursued from the beginning of my professional studies. Whenever the opinions on subjects of importance, which an attention to cases had impressed upon my mind, differed from those which seemed to prevail amongst other practitioners, I published the facts, and the inferences which I drew from them, because I thought that the former at least deserved attention, and that the latter would either be confirmed or confuted by the result of general experience.

It is more, however, on account of the cases, than of the conclusions which they suggested, that I am desirous of republishing my surgical writings. Various advantages result even from the publication of opinions; for though we are very liable to error in forming them, yet their promulgation, by exciting investigation, and pointing out the deficiencies of our information, cannot be otherwise than useful in the promotion of science.

The publication of the opinions which naturally arise in the mind of the surgeon, from the cases submitted to his observation, possesses the further utility of rendering a prolix detail of circumstances unnecessary. It would be almost impossible to relate every minute occurrence, that tended to impress certain conclusions on the mind of the observer; or to relate every trifling particular of treatment, by which the surgeon endeavoured to accomplish his object. Such a dull and tedious narrative, which would weary and disgust the reader, may indeed be well spared; because the practitioner may, and must, repeatedly peruse the case at large in

the book of nature. The writer merely points out those signs by which any disease may be discriminated from others, and identified as one of the particular class to which he is desirous of exciting the public attention.

With regard to the cases, which I consider as the valuable part of the book, I may observe, that it is not to be expected that the records of them will make so strong an impression on the minds of the readers, as the observance of them has done on that of the writer; but when the same occurrences are met with in practice, then will the impression become more vivid, and knowledge arise, as it usually does, from personal experience. If the facts contained in these volumes occurred so rarely, that others could not be expected to meet with them, their relation would be of little value. They may, however, not improperly be compared to certain species of plants, by no means uncommon, which are liable to be confounded with others by an inattentive observer; but when their discriminating characters are once pointed out, they may be so readily distinguished,

collected

collected and examined, as to render a more minute description of them unnecessary. If diseases could, like other objects which we mean to delineate, be placed in various points of view, and illuminated at pleasure, so as to shew distinctly their different parts, one accurate representation would suffice; but we see them obscurely, and as knowledge increases, it serves, like light shining from different places, to illuminate the various parts of the objects of our examination.

For, as I have expressed it in the first edition of these writings, "in proportion as we advance in knowledge, we are led to remark many circumstances in the progress of a disorder which had before passed without notice; but which, if known and duly attended to, would clearly point out the nature of the complaint. Hence the records of former cases are of much less value; as the symptoms about which we are now anxious to enquire, have in them been entirely overlooked." It therefore, becomes necessary that each writer should state those circumstances to which he has been particularly attentive;

attentive; nor need he further delineate the case than by a general outline, so as to render it intelligible.

The relation of cases may be compared to the representations which an artist gives of natural objects, and which are valuable only in as much as they are correct or vivid delineations of reality. Such portraits, sketched by a person of dull perception, or by one whose optics are perverted by prejudice and theory, are either valueless or deceptive; and hence, perhaps, has arisen that objection to books of cases which I find to be very prevalent. In the imperfect sketches which I have laid before the public, my chief object has been to touch up and bring into view some parts of the subjects which have not been so clearly seen or strongly delineated by former draftsmen.

When books of this kind are published, mutual forbearance is requisite on the part both of the writer and the reader. The former should not expect his work to be approved of, till the latter has examined whether his representation of diseases be correct, and

his

his conclusions legitimately drawn from the facts which he has observed and collected. Neither should the reader condemn the work till he has examined the subject, and is in consequence able to point out the errors of the premises or conclusions. The author's view of a subject may indeed be correctly formed from the facts which he himself has witnessed; but it may differ from that which more extensive experience would have suggested. For this difference no blame can properly be attached to him; he relates what has fallen under his own observation, and invites others to attend to the same facts.

I have been induced thus to offer my sentiments respecting the design, mode, and probable advantages of recording cases, not with a view of vindicating the plan which I have pursued, for that indeed cannot be necessary, since it is the same that has been followed by the best authors on surgery. My object, by these remarks, has been to induce others to reflect how they may most effectually promote medical knowledge. No one can have thoroughly studied his profession

fession without perceiving how susceptible it is of improvement, without discerning how inadequate the efforts of an individual must be towards the accomplishment of this purpose, and consequently without feeling an earnest wish to engage general co-operation in this desirable object.

In republishing my former writings, I have left out all that part which relates to physiology. The surgical facts contained in them, will now be found incorporated with my later publications, under the same general head of Surgical Observations. I have also made those alterations and enlargements which a greater share of experience has dictated. The subjects have likewise been transposed. I have put at the beginning of the book those cases which shew how much local diseases depend upon the general state of the patient's health, because I shall have frequent occasion to refer to this subject in the succeeding parts of the work.

I feel much gratified in finding, that, though a larger portion of experience has enabled

enabled me to add some new and striking facts to this edition, it has not shewn me any thing that I ought to retract or materially to alter. This, indeed, must be the case in a book containing only facts, and opinions not incautiously deduced from them. Several of the papers contained in these volumes met with very general and strong objection, which I considered as the greatest compliment that could be paid to them. For if the views which I had taken of various practical subjects were different from those of others, and were ultimately found to be correct, the greater was the necessity for their publication.

SURGICAL OBSERVATIONS.

ON THE CONSTITUTIONAL ORIGIN, AND TREATMENT OF LOCAL DISEASES.

AN evil seems to me to have arisen from the artificial division of the healing art into the medical and surgical departments. This division has caused the attention of the physician and the surgeon to be too exclusively directed to those diseases, which custom has arbitrarily allotted to their care. The effects of local disorders upon the constitution have, in consequence, been too little attended to; and indeed I know of no book, to which I can refer a surgical student for a satisfactory account of those febrile and nervous affections which local disease produces, except that of Mr. Hunter*. The reciprocal operation of constitutional disorders upon local diseases has obtained

* Treatise on the Blood, Inflammation, &c.

still less attention. To investigate more particularly some parts of these subjects, and to submit them to public notice, are the proposed objects of the present paper.

No part of the animal body can in general be very considerably disordered, without occasioning a correspondent derangement in other parts of the system. Such disorder has been considered by Mr. Hunter as the result of universal sympathy. This consent of the whole constitution with its parts manifests itself, in particular instances, by a greater disturbance of the functions of some organs than of those of others; and from this circumstance diseases have derived the appellations, by which they are commonly distinguished. If the actions of the sanguiferous system be principally disturbed, and the temperature of the body subject to unusual variations, the disease is termed fever: if the nervous system be chiefly affected, a state of vigilance or of delirium may be produced: convulsions and tetanus take place, when the functions of the muscular system are more particularly deranged. Though the

the disorder of particular organs thus gives a character and denomination to the disease, it is sufficiently evident, in the instances adduced, that the whole constitution is disturbed; while certain parts are chiefly affected, perhaps from unknown circumstances relative to the nervous system, or from a predisposition to disorder existing in the affected parts. It seems to be ascertained, that persons of particular constitutions are predisposed to those febrile actions of the sanguiferous system, which constitute the inflammatory fever; that there is a propensity to convulsions in children; and to tetanus in the inhabitants of warm climates.

It may be a fit subject for enquiry, whether it be possible for particular organs to become affected otherwise, than through the medium of the nervous system in general. Though some instances of sympathy are strange, and perhaps inexplicable, there are strong reasons for believing that the inflammatory fever, the state of vigilance and delirium, convulsions and tetanus, which arise

in consequence of injuries of the limbs, are produced by irritation imparted to the brain, which, by a kind of reflected operation, occasions a greater disorder of some of the organs of the body than of others, and thus gives a character and denomination to the disease*.

* Mr. Hunter, who, with that patience and industry for which he was so remarkable, collected and examined all the facts which he had observed relative to the subject of sympathy; has divided it into continuous, contiguous and remote. It is the remote sympathies, according to his division, of which I am now speaking.

The observations of Dr. Darwin on ocular spectra, and indeed the consideration of the nervous functions in general, render it highly probable that sensation is not produced merely by impulses made on the nerves, but by means of actions excited by such impulses, which actions are continued to the sensorium. Nervous actions, then, may take place without the usually exciting causes; such actions may be continued through the medium of the reticular communications of nerves, and thus physiologically we may explain the continuous and contiguous sympathies. Actions also productive of sympathetic sensations may be supposed to take place through the media of ganglia or plexuses. In remote sympathies, however, we must suppose the actions which originate in an injured or diseased part of the body to be continued to the sensorium, and there to excite the actions of other nerves, &c.

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That the stomach and bowels are disordered by injuries and diseases of parts of the body, has been remarked by various persons; but the subject has never been extensively surveyed, nor viewed with that accuracy of observation, which its high importance merits. It has been observed that sprains of tendinous or ligamentous parts produce sudden sickness; and Mr. Hunter has attributed that shivering which is consequent to accidents, and attendant on some diseases, to the state of the stomach. It is known that, in some local injuries from accident or operations, the stomach has appeared to be the part principally affected. But remarks on the affections thus induced in the digestive organs have been made only in a cursory manner; and it is my intention to examine the subject more particularly. It also appears to me that the connexion of local diseases with the state of the constitution in general is either not sufficiently understood, or not duly regarded by the generality of practitioners; and I also mean to claim their particular attention to this subject. I shall in the first place select a case

to shew how the stomach and bowels, or, to speak yet more extensively, the digestive organs may be affected from local disorder.

Sudden and violent local Irritation will sometimes produce an equally sudden and vehement Disorder of the digestive Organs.

CASE I.

A HEALTHY gentleman, about twenty-five years of age, was induced to submit to an operation for the return of an adherent omental hernia, rather in order to remove the inconvenience and apprehension which the disorder occasioned, than from any urgent necessity; for any increased exertion in walking or riding produced the descent of a portion of intestine behind the thickened omentum, and obliged him to stop, and replace it: and he frequently could not accomplish the reduction without considerable difficulty. The application of trusses had been quite ineffectual in obviating these alarming inconveniencies.

The

The patient's diet on the day preceding the operation was scanty, and consisted of fluid substances. He took on the morning of the operation some Epsom salts and manna, which purged him twice and seemed to have emptied his bowels. A portion of the omentum was cut off, and the remainder was returned, after two vessels had been tied. The operation was followed by general disorder of the constitution, manifested by a full and strong pulse, furred tongue, great anxiety, restlessness, and total want of sleep. The stomach was particularly affected, being distended, uneasy on compression, and rejecting every thing that was swallowed. He was bled largely in the evening, and took saline medicines, but could not be prevailed on to swallow any thing else, except some toast and water. The sickness had in some degree abated on the next day. A solution of magnesia vitriolata in mint water was prescribed in small occasional doses, in order to relieve the disorder and distension of the stomach, by procuring some discharge from

the bowels *. In the course of the day he took an ounce of the salts, which were not rejected by the stomach, yet he could scarcely be prevailed upon to take any thing else. The tongue was still covered by a thick yellow fur; the skin was hot and dry, and the pulse frequent. As there was no particular tenderness about the hypogastric region, he was not again bled. The second night passed without any sleep. As the salts had produced

* It is most probably the disorder of the brain which affects the stomach; but the re-action of the latter affection is liable to increase and maintain the former, by which it had itself been produced. The effects that result from the sympathy of the whole constitution with local disorder vary greatly both in nature and degree. Sometimes the brain is the part chiefly affected; on these occasions the nervous energy appears to be much impaired; and in some instances of this description, the patient gradually sinks, little fever or re-action of the constitution being observed; in other instances, however, there is a low delirium, with a slight degree of febrile action; and in others again, the delirium is more violent, and is accompanied with a proportional increase of fever, subsultus of the muscles, and convulsions. Sometimes other parts of the body or particular organs seem to be principally affected; indeed the variety of effects produced under the circumstances alluded to is such as to baffle description.

no effect, the same medicine was ordered in an infusion of senna, with the addition of some of the tincture, which, by being given in very small doses, was retained. When, however, it seemed likely that no effect would result from this medicine, a grain of calomel was given at night, and repeated on the following morning. Still the loathing of food continued. The third night passed, like the former ones, without sleep, and in great anxiety. On the next morning, two pills, containing five grains of the pil. colocynth. and the same quantity of the pil. aloet. cum myrrhâ, were given every fourth hour. These procured no stool, nor produced any sensation which inclined the patient to believe that they would operate. Again he passed a sleepless night: but, towards the morning, he felt his bowels apparently filling, to use his own expression, and a profuse discharge ensued. A dozen copious, fetid, and black evacuations took place between five and ten o'clock, and he had several others in the course of the day; after which his appetite returned, his tongue became clean, and a sound and continued sleep succeeded.

That

That the chylopoietic organs were the parts chiefly affected in this case can scarcely be questioned. The sickness, the tenderness of the parts in the epigastric region, the aversion to food, and the state of the tongue, all indicate that the stomach was much disordered. The insusceptibility of the bowels to the action of medicines, which would ordinarily have produced discharges from them, and the profuse evacuations which subsequently relieved the patient, prove that these viscera participated in the affection. The black colour of the discharges shews, I think, that the secretion of the bile was not healthy, and that the liver was affected with the other chylopoietic viscera.

It may be supposed, that the injury done to the omentum might contribute to produce the disorder of these organs, rather than of others. We do not, however, find that such effects commonly succeed to similar operations. The consequences in the present case were more severe than might have been expected, if it were not known, that an operation performed on a healthy patient is more

more apt to produce considerable disorder, than when performed on one whose constitution has previously sustained the irritation of a disease, for which the operation becomes necessary.

It is probable also that the restlessness and anxiety of the patient were aggravated, if not principally caused, by the state of the chylopoietic viscera; since the relief which took place in those parts on the renewal of secretions into them, certainly removed the nervous and febrile symptoms. That the discharges were the effect of secretion is proved by the absence of alimentary matter in the bowels, in consequence of the action of the purgative administered on the morning of the operation, and the abstinence both before and after that period*.

I could

* Two instances are recorded in Mr. Pott's Works, of the operation for the reduction of an hernia being performed where no strangulation existed. See Pott's Works, Vol. III. pp. 295, 299, edition of 1783.

The operation in the case just related was undertaken upon the authority of these cases, which were both successful. I performed a similar operation on a patient, whose life had been twice in imminent hazard from strangulation

I could relate numerous cases in support of the inferences, which I have drawn from the preceding history; that local irritation acting on the nervous system may affect the digestive organs in a very serious manner, and thereby create great general disorder of the system, which is afterwards alleviated in proportion to the amendment that ensues in the state of those viscera. Such consequences of great local irritation must frequently occur to every one; it is therefore unnecessary to adduce more instances to support the opinions here delivered.

With respect to the treatment of cases of this description it may be right to add, that the primary object should be to produce secretion from the irritable organs. In the case

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gulation in a case of adherent epiplocele, in which a truss did not keep up the hernia, and the operation was followed by violent peritonitis, which could only be subdued by such copious and repeated venæsection, as endangered the patient's life. These two cases have made such an impression on my mind, that I should be very averse in future to undertake similar experiments.

which

which has been related, and in many others recorded in this volume, the effect of secretions occurring from the disordered organs in relieving their irritable state is very manifest. In many instances opium will not prevent continual efforts to vomit, yet when by magnes. vitriolat. or purgatives administered in the form of pills, and clysters, stools are procured, the vomiting ceases, the stomach retains both food and medicine, and general tranquillity of constitution is as suddenly restored.

A slighter Degree of continued local Irritation will produce a less violent Disorder of the digestive Organs.

IF then vehement local irritation can produce a violent disturbance of the chylopoietic organs, it may be expected that a less degree of a similar cause will produce slighter effects of the same nature. Indeed, the foregoing case was related not merely because it seemed worthy of record by itself, but chiefly to prepare the reader for the observations which are to follow.

This

This slighter degree of derangement occurs in the advanced stages of lumbar abscess, diseased joints, compound fractures, and all kinds of local disease, which impart considerable and continued irritation to the whole constitution. We also find a less important disease, as for instance, a fretful ulcer, keep up a disorder of the system in general, and of the digestive organs in particular, which subsides as the irritable state of the ulcer diminishes. But as practitioners in general may not perhaps have so attentively remarked these circumstances as to be familiarly acquainted with them, it may be useful to mention a very common occurrence, which cannot have escaped observation. I allude to the effects of the irritation of teething upon the health of children. The brain is sometimes so affected as to cause convulsions; the digestive organs are almost constantly disordered. The appetite fails; the tongue is furred; the secretions of the liver are either suspended, diminished, or vitiated. The bowels are either purged or costive, and the fæces fetid. The fæcal matter is often mixed with mucous and other secretions.

tions. There is also frequently a very troublesome cough. Such symptoms generally subside when the local irritation ceases, but sometimes the disorder of the digestive organs, thus excited, continues and disturbs the general health of the patient.

If local irritation be capable of disordering the bowels, it seems natural to conclude that it acts upon them through the medium of the brain. If also the brain and nervous system should be disordered, without any apparent local disease, similar derangements may be expected to take place in the functions of the digestive organs. In cases, where some morbific poison has been absorbed, producing effects similar to those of syphilis, we usually find the irritation of the constitution which ensues to be accompanied with this slighter disorder of the chylopoietic organs.

Whenever, also, the nervous energy and general powers of the constitution have been weakened and disordered by any violent disease, as fever, small pox, measles, hooping cough,

cough, &c. the digestive organs are frequently affected in consequence, and such affection becomes, as will afterwards be explained, the cause of many secondary diseases.

In persons, likewise, who have naturally a weak or irritable state of the nervous system, we find the digestive organs disordered in a similar manner. Improprieties in diet will also produce a similar state of irritation, weakness, and disorder of the functions of the digestive organs.

This slighter disorder of the chylopoietic organs is, in general, manifested by a diminution of the appetite and digestion, flatulence, and unnatural colour and fœtor of the excretions, which are generally deficient in quantity. The tongue is dry, whitish, or furred, particularly at the back part; this symptom is most apparent in the morning. The fur is greatest at the back part, and extends along the middle of the tongue to the tip, the edges remaining clean. As the disease advances, a tenderness is felt

when the epigastric region is compressed, and the patient breathes more by the ribs, and less by the diaphragm than in the healthy state. The urine is frequently turbid.

In this general enumeration of the symptoms, several circumstances are omitted which occur occasionally, and which may, when the subject shall be better understood, denote peculiarities in the disease, and require corresponding peculiarities in the medical treatment. I shall here notice a few of them. The appetite is sometimes moderately good, when the digestion is imperfect; and the latter may not be defective, although the disease still exists. In some instances, indeed, the appetite is inordinate. Tenderness of the epigastric region on pressure, is not always an attendant even in advanced stages of the disease. The bowels are alternately costive, and lax even to purging*. The urine is sometimes pale-co-

* I have known persons whose bowels were ordinarily costive, and whose general health was much deranged by disorder of the digestive organs, though they were unconscious of its existence, feel pleased that their bowels were in a comfortably lax state; yet on observing the stools, they resembled pitch in colour and appearance.

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loured and copious like that of hysterical patients.

Patients affected in the manner above described commonly declare they are in good health, except that they feel disturbed by their local complaints; yet they are found, on enquiry, to have all the symptoms, which characterize a disordered state of the digestive organs. The mind is also frequently irritable and despondent; anxiety and languor are expressed in the countenance. The pulse is frequent or feeble; and slight exercise produces considerable perspiration and fatigue. The patients are sometimes restless at night, but when they sleep soundly they awaken unrefreshed, with lassitude, and sometimes a sensation, as if they were incapable of moving. Slight noises generally cause them to start, and they are, to use their own expression, very nervous. These circumstances seem to me to indicate weakness and irritability of the nervous and muscular systems; which, in addition to the disorder of the digestive organs, that has been described, are the chief circumstances observable relative to the general health of those

those patients, whose cases are related in the following part of this paper. By correcting the obvious errors in the state of the digestive organs, the local disease, which had baffled all attempts at cure by local means, has speedily been removed, and the patient has acknowledged that such an alteration has taken place in his general health, as excited his surprize.

A Review of the natural Functions of the digestive Organs, and an Enquiry into the Signs which denote them to be in a healthy or disordered State.

BEFORE I proceed, I may be allowed to enter more fully into a consideration of the symptoms which denote disorder of the digestive organs; in order to induce surgeons to pay that strict attention to them, which the importance of the subject so well deserves. It would indeed be impossible for the reader to understand, without such prefatory observations, my object in the treatment of the cases which will presently be related, or the opinions which I have formed, relative to their mode of cure.

 The

The changes which the food undergoes in the digestive organs of the more complicated animals are threefold; and distinct organs are allotted to each of the three processes. Digestion takes place in the stomach; chylification in the small intestines; and a third process, hitherto undenominated, is performed in the large intestines. It is probable that in some cases, one set of organs may be more disordered than the others, and of course one of these processes may fail more than the rest. For instance, the stomach may digest the food in a healthy manner, although the intestines do not perform their share of the changes, which they ought to effect.

The food is converted in the stomach into a viscid semitransparent substance called chyme; and that this change is effected by the agency of the succus gastricus, is a point as well ascertained as any in physiology. In a state of health this conversion takes place without any appearance of that natural decomposition which animal and vegetable matter would ordinarily undergo in a warm

and moist place. When, however, digestion is imperfect, gaseous fluids are extricated from the alimentary matter. Vegetable food becomes acid, and oils become rancid. Uneasy sensations are also felt, and undigested aliment may be observed in the fæces.

Disorder of the stomach is however more readily perceived by adverting to the state of the tongue, which often indicates an irritable and unhealthy condition of the stomach, when no manifest symptoms of indigestion occur. If there be no fever to disturb the secretions in general, the change which is visible in the tongue can be imputed to no other cause than local disease, or a participation in a disorder of the stomach or lungs. Local irritation or mental anxiety will cause a white and dry tongue; but does not this effect arise through the medium of an affection of the stomach? For although the secretions of the tongue must partake of the general disturbance which prevails in fever, their especial disorder may be, in that case, also, not improperly attributed to the state of the stomach.

The state of the tongue is, in general, an infallible criterion of a disordered condition of the stomach; but it does not point out the kind and degree of that disorder. In recent and considerable affections, where the appetite is lost, and the digestive powers are greatly impaired, the appearances of the tongue are by no means so strikingly unhealthy as in more confirmed cases, where neither the appetite nor digestion appear materially deficient. It is probable that a continuance of irritation in the stomach may so affect the tongue, as to render unnatural secretions habitual to the part, and that these exist independently of the original cause, or may be reproduced by trivial degrees of disorder. Nay, sometimes the cuticle of the tongue seems to have lost its transparency, and to become permanently white, in consequence of continued irritation *.

* In hectic fever, although the stomach may be very weak, the tongue is generally clean; it is therefore probable that the foulness of the tongue denotes irritation of the stomach, and not mere weakness when accompanied with tranquillity.

After

After making the allowances, which such circumstances require, we may in general be enabled to detect a disordered state of the stomach by observation made on the tongue: and, as it is of consequence to ascertain such disorder at an early period, when the symptoms are probably slight, this organ should be observed in the morning, when it will be found much furred, particularly at the part next the throat. Its appearance may vary in different parts of the day from varieties in the state of the stomach, depending on the excitement which is derived from food, or a state of irritation arising from too long fasting. The tongues of many persons with disorder of the stomach look moderately healthy during the day, though they have been so much furred in the morning, that it has been deemed necessary to scrape them.

A disordered state of secretion, either as to quantity or quality, will be the natural effect of irritation of a secreting organ. This is evidently the case with the tongue; and we may, with great probability, conjecture that the same consequence also takes place in

the stomach. Since the juices of the stomach are the immediate agents in digestion, that process must be disturbed in proportion as its secretions are deficient or vitiated.

If undigested matter pass from the stomach into the intestines, it can scarcely be supposed that their powers are capable of converting it into chyle; and it may become irritating to those organs in consequence of the chemical changes, which it may then undergo. When digestion is imperfect, animal and vegetable substances experience considerable chemical changes before they leave the stomach; and similar changes may continue to take place during the time they are detained in the bowels, unless counteracted by the powers of the digestive organs; powers which seem chiefly to belong to the fluids which are secreted into them.

The extent of the power which the intestines possess of converting what they receive from the stomach into chyle, or of preventing chemical changes, is unknown. It is probable that much undigested matter is absorbed by the lacteals, when the digestive powers

powers fail in their functions. This is apparently the case in diabetes, where the vegetable matter floats in the serum of the blood, rendering it turbid, and afterwards combines so as to form sugar in its passage through the kidneys. The strong odour, which various kinds of food impart to the urine, indicates that different substances are absorbed indiscriminately from the intestines. It is probable that a turbid state of the urine, and variations from the natural odour of healthy urine, may very frequently arise from a similar cause; *viz.* from the imperfect action of the digestive organs, in consequence of which, unassimilated matter is taken up by the lacteals, and afterwards separated from the blood in the kidneys. It may be reasonably conjectured that the same powers, by which the kidneys convert the old materials of our body into that peculiar modification of animal matter, which is dissolved in the water of the urine, and which has been called by the French chemists urée, may also enable it, in a healthy and vigorous state, to dispose of much unassimilated substance in the same way. The further consideration of this subject would, however,

lead

lead to a discussion foreign to the purpose of the present paper: it will be sufficient to remark at present, that the state of the urine may afford assistance in ascertaining the existence of disorder of the digestive organs, and in indicating its nature. It has been already mentioned, in the brief account of the symptoms, that the urine is frequently turbid. It should, however, also be observed, that the quality of the urine greatly depends on the state of the nervous system. It is frequently, in the disorders of which I am speaking, pale-coloured and copious; which is probably owing to a state of nervous irritation, such as exists in hysteria. It is not improbable that disorders of the digestive organs, by causing the frequent secretion of unnatural urine, may produce irritation, and subsequent disease of the kidneys, and other urinary organs.

Modern physiologists seem to agree in the opinion that the succus gastricus is the agent, by which digestion is effected; but they are not so unanimous as to the immediate cause of chylification. It is not improbable that the succus intestinalis is a principal

principal agent, although its qualities have not yet been enquired into; for, indeed, the investigation would be attended with difficulties almost insuperable.

Since the bile and pancreatic liquor are poured into the intestines at a small distance from the stomach, it is natural to consider these fluids as useful in effecting the change, which the alimentary matter undergoes in the small intestines, namely, its conversion into chyle. The chyme, or aliment digested by the stomach, being viscid, the pancreatic juice has been considered as an useful and necessary diluent, and perhaps this fluid may have other properties with which we are unacquainted.

The uses of the bile have of late much engaged the attention of physiologists. Mr. Hunter observed that it did not seem to incorporate with the chyle; and it certainly cannot do so and retain its own nature, since its colour and taste are so intense, that it would impart these properties to the chyle, if mixed with it in the smallest quantity. The difficulty of conceiving that the

the two fluids can be agitated together by the peristaltic motion of the intestines, without becoming incorporated, has led to an opinion that the bile may combine with the alimentary matter, and lose its original properties; but nothing of this kind is ascertained. Fourcroy thinks that the alkali and saline ingredients of the bile may combine with the chyle, and render it more fluid, while the albumen and resin may combine with the excrementitious matter. It is, indeed, evident that the bile combines either totally or partially with something separated from the chyle, and exists formally in it, and in a state of health uniformly dyes it of its peculiar colour; and therefore it has of late been supposed, that the bile may serve to purify the chyle, by precipitating and combining with its feculent parts *.

It has been said in the brief and general recital that has been given of the symptoms,

* In the enquiry into the probable uses of the bile, it ought to be observed, that in many persons, in whom that secretion is either for a considerable time wholly suppressed, very deficient, or much depraved, it does not appear that the nutrition of the body is defective.

toms, which characterize disorder in the chylopoietic organs, that the stools are of an unnatural colour and odour. Medical men entertain various opinions respecting the colour of the fæces; to me this property seems generally to depend on the kind and quantity of the bile. All the secretions, which are poured into the alimentary canal, except the bile, are colourless or white; if, therefore, this fluid were wanting, the residue of the aliment would be of the colour, which might be expected to result from its undigested parts combined together. When, for instance, the secretion of bile is stopped by the irritation of teething in children, whose diet is chiefly bread and milk, the fæces are white; when this secretion is obstructed in adults, the stools are pale like whitish-brown paper.

In cases of disease, however, coloured excretions may take place from the bowels. There is great reason for ascribing the discharges in the disease called melæna to a vitiated secretion from the surface of the alimentary canal. I was intimately acquainted

quainted with a patient, who suffered repeated and increasing attacks of constitutional irritation. When the disorder was wrought up, as it were, to a crisis, he was forewarned by a sensation, as if his stomach was filling, of the occurrence that was about to take place. In less than a quarter of an hour he would vomit more than two quarts of a fluid resembling coffee grounds in colour and consistence. Shortly afterwards very copious discharges of a similar darker coloured and offensive matter, took place from the bowels: but a green viscid bile, appearing distinct and uncombined, was intermixed with this. These evacuations ceased in a day or two, and the constitutional irritation disappeared with them.

I examined the bodies of several persons, who died under attacks of this nature, and found the villous coat of the alimentary canal highly inflamed, swoln and pulpy. Bloody specks were observed in various parts; and sphacelation had actually taken place in one instance. The liver was healthy in some cases, and diseased in others. I con-

clude therefore that these diseases, which were termed hæmatemesis and melæna, arose from a violent disorder, and consequent diseased secretion of the internal coat of the bowels: and that the blood, discharged when the affection was at its height, did not flow from any single vessel, but from the various points of the diseased surface.

Indeed I think it probable, that the profuse discharges, which sometimes follow the continued exhibition of purgatives, consist of morbid secretions from the bowels themselves, and not of the residue of alimentary matter detained in those organs. Such evacuations, either occurring spontaneously, or excited by medicine, frequently relieve irritation of the chylopoietic viscera.

It seems probable that the stools which resemble pitch are principally composed of diseased secretions from the internal surface of the intestines, since they do not seem either like the residue of the food or discharges from the liver. Can we suppose that all the black and fetid matter which was

was discharged from the bowels, in the first case, was poured forth solely from the liver?

The subject of morbid secretions is however particularly illustrated by that well-known alvine discharge, which so much resembles yeast in colour and consistence that it cannot be confounded with fæces, with blood, or with a vitiated secretion from the liver. A medical man of my acquaintance took, for some disorder in his stomach and bowels, an aperient medicine, which apparently emptied those organs. He ate nothing but little bread in broth for his dinner, and a small quantity with his tea in the evening. He experienced an uneasiness in his bowels, and an inclination to evacuate them after he had gone to bed; but he resisted this desire till four o'clock in the morning, when its urgency forced him to rise. He then discharged, what he supposed to amount in quantity to a gallon, of a matter exactly like yeast, unmixed with any bile or fæces. When he arose in the morning, he had a similar evacuation of about a quart; and on the succeeding day there was

a solid

a solid stool, apparently of the same substance, coloured of a light green from an admixture of bile. He had a natural stool the next day: his appetite returned, and the uneasy sensations subsided.

An unhealthy colour of the fæces may further be attributed to some degeneracy in the quality of the alimentary matter; such as may be supposed to take place when the digestive organs fail in the performance of their offices, and different alimentary substances are in consequence detained in the bowels, where they may pass through chemical decompositions, and recombinations. But, though I am inclined to allow the full operation of these causes, the following reasons lead me to believe that the colour of the fæces generally depends on the kind and quantity of the bile. In the natural state of the digestive organs, when there is no peculiarity of diet, and no medicine is taken, the bile alone colours the residue of the food. The fæces voided during a state of disorder of the digestive organs are sometimes partially coloured; which circumstance cannot be well

 accounted

accounted for upon any other supposition than that of an irregular secretion of the bile. Fluids secreted from the intestines do not usually enter into combination with the fæcal matter, but appear distinctly when excreted. Thus we find mucus and jelly discharged from the bowels, unmixed with the *fæces*. Medicines which affect the liver produce a very sudden change in the colour of the fæces. Small doses of mercury, without any alteration of diet, sometimes change the stools immediately from a blackish to a light yellow colour, which indicates a healthy but deficient secretion of bile.

The appearance of healthy bile in the human subject is that of a deep brown, resembling a mass of powdered rhubarb when just moistened with water. Yet if bile be dropped into water, a single drop will dye a large quantity of water of a bright yellow, so that the deep brown appearance is the effect of the intensity of the yellow colour. In health there ought to be so much bile poured into the bowels, as when commixed with the residue of the food, to dye it of the peculiar colour of bile. It is right however to say that

that the colour of the bile may vary considerably without any apparent disorder of the organ which prepares it, or of the health in general. Sometimes, indeed, we find green bile in the gall bladder, when the liver is not diseased. I cannot, however, but think that the natural colour is a yellow, so intense as to appear brown. Green bile is usually poured out in circumstances where there is evident disorder of the digestive organs; and we cannot well suppose that there are two kinds of healthy bile. The quantity of this fluid should be such as completely to tinge the excrement of its peculiar colour. By attending, therefore, to the colour of the fæces, the kind and quantity of bile, which the liver excretes, may in general be ascertained.

The colour of the alvine excretions in disordered states of the viscera is various. Sometimes they appear to consist of the residue of the food, untinged by bile. Sometimes they are of a light yellow colour, which denotes a very deficient quantity of healthy biliary secretion; they may also be of a deep olive, of a clay brown, and of a

 blackish

blackish brown; all which shew a vitiated state of the biliary secretion.

Any kind of brown, which dilution will not convert into yellow, I should consider as unhealthy, since the colour of healthy bile is a bright yellow, which by concentration appears brown.

Such are the circumstances which I have collected from my own observation, and the reports of others, relative to the alvine excretions, in the disorders which have been described.

I have dwelt thus particularly upon the subject of the biliary secretion, from a belief that its quantity and quality can, in general, be ascertained by inspection, and will therefore serve to indicate the presence of disorder. Whether the foregoing opinions be correct or not, it will, I think, be generally granted that the excretions from the bowels commonly indicate the healthy or disordered state of the digestive organs. By the state of the fæces we may judge how far digestion has been effected; and gelatinous mucose

mucose and other matters being mixed with them, denote irritation or disease of the bowels.

The effects, which medicine or diet may have upon the colour of the fæces, ought, however, to be considered. When the food is coloured, and this colour is not altered by digestion, it will, of course, appear in the fæces; hence if it should be thought desirable to know accurately the state of the biliary secretion, it would be right to restrict patients to a diet that is not likely to colour the fæces. The green colour of vegetables tinges the fæcal residue of the food. Steel also is known to blacken the fæces. It should also be remarked that the exposure of the fæces to air after their expulsion, will, in some instances, cause a considerable alteration in their colour. In our endeavours, therefore, to ascertain whether the liver is performing its office rightly, by observing the colour of the fæces, attention should be paid to these circumstances.

I conclude this review of the opinions entertained respecting chylification, by ob-

serving that if the succus intestinalis be an agent in this function, disorder of the intestines is likely to affect its secretion, and thus impede this second important part of the process of assimilation.

The residue of the alimentary matter, mixed with the bile, passes from the small into the large intestines, and there undergoes a sudden change; it acquires a peculiar fœtor, and becomes what we denominate fæces. This change is so sudden, that it cannot be ascribed to spontaneous chemical alterations (which would be gradual) but to some new animal agency. If the contents of the small intestines at their termination, and of the large at their commencement, be examined, they will be found totally different, even within a line of each other; the former being without fœtor, and the latter being in all respects what is denominated fæces. Though chemists then might speak of the feculent matter of chyle as fæces, yet physiologists would rather apply that term to the change in the residue of the food, which takes place in the large intestines, and which seems to be effected by the animal

powers

powers of those organs. The fæces quickly suffer chemical decomposition out of the body, although they often remain in the bowels without undergoing the same kind of change. Their chemical decomposition is attended with the sudden formation of ammonia; yet if they be examined when recent, they are found to contain acids which ammonia would neutralize. The inference, therefore, naturally arises, that this third process, I mean the conversion of the residue of the aliment into fæces, may, amongst other purposes, be designed so to modify that residue, as to prevent it from undergoing those various chemical changes, which might be stimulating to the containing organs, as well as injurious to the general health.

In a perfectly healthy state of the digestive organs, probably no chemical decomposition, even of the fæces, takes place; yet such changes happen, in some degree, without apparently producing any injurious consequences. To chemical changes we may probably attribute the extrication of inflammable air, and the various and unnatural

tural odours of the fæcal matter, which are observable in disordered states of the digestive viscera.

The means by which this modification of the residue of the food, which takes place in the large intestines, is effected, are but little known. Analogy leads us to refer it to the effects of a secretion from the lining of those intestines in which it occurs. Now if this secretion deviates from the healthy state, in consequence of an irritated or disordered state of those organs, we may reasonably expect a corresponding derangement of the process, by which the residue of the food is converted into fæces.

Further Enquiry into the Nature and Effects of that Disorder of the digestive Organs, the symptoms of which have been recited at Page 16.

HAVING taken this general view of the functions of the chylopoietic viscera, in order to facilitate the forming a judgment relative to those circumstances which indicate their derangement, I return to speak more

more fully of that affection of them, which I have described, as arising from causes recited at page 16. This subject, it must be acknowledged, is very important, if it can be shewn that disorders of the digestive organs are the cause of a great number of other diseases. The enquiry would then not only lead us to discover the source of many disturbances of the constitution, which originate in those of the digestive organs (for patients have no suspicion of any disorder existing in them), but would also lead to the prevention and cure of many secondary diseases of a more vexatious and sometimes of a more fatal nature, than those from which they originated.

If the tongue be furred at its back part in the morning, when there is no fever, it is reasonable to infer in general that the state of the tongue is owing to its participating in the irritation of the stomach. Such participation produces an alteration in the secretions of the tongue; they are either deficient in quantity, or vitiated in quality. A state of irritation in any secreting surface is, indeed, likely to be attended with the same consequences,

sequences. It is, therefore, fair to infer that, when a general disorder of the digestive organs takes place, those fluids, which produce the changes that the food undergoes in them, are deficient or depraved, and consequently that digestion and the subsequent processes must be imperfectly performed. The liver is likely to participate in the disorder, and the biliary secretion to be diminished or vitiated. This circumstance admits of ocular demonstration; and I have, therefore, considered it as an evidence of a more or less general disorder of the digestive organs. A very reasonable objection may, however, be made to considering the derangement of the functions of the liver as a criterion of those of the stomach and intestines; since the liver is independent of the latter organs, and may be the subject of a disorder confined to itself. In some cases, also, the alimentary canal may be affected, without disturbing the liver. Such circumstances may happen occasionally; but they are not ordinary occurrences, and should be considered as exceptions to general rules, which do not militate against their common operation. In general, affections of the former influence the functions of

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the latter: and the state of the biliary secretion affords a very useful evidence of a more or less general derangement of the chylopoietic viscera, and should excite our attention to investigate its kind and degree.

I have stated, in describing the symptoms which denote disorder of the digestive organs, that the fæces are generally deficient in quantity. This circumstance may be accounted for in various ways. It may be ascribed to diminished or unhealthy secretion of bile, which does not precipitate the usual proportion of feculent matter from the chyle. Persons whose bowels are lax, and not inactive in carrying downwards the feculent matter, void it daily in deficient quantities. It may be supposed too that, either from the deficiency of bile, and consequent want of excitement, or from the effects of disorder, a torpid state of the bowels may exist, which causes them to carry downwards the feculent matter in small quantities. This circumstance may produce a greater absorption of the fæces than what is natural, or an accumulation of them in the colon.

That

That the digestive organs in general were affected in the cases of local disease, which I am about to record, is most evident; but I am aware that many varieties of disorder may be included in the general description of the symptoms, which I have given. Future observations may lead to further distinctions; but I see no impropriety at present in speaking of the disordered state as general; since it is probable that no material disorder can ordinarily take place in one of the digestive organs, without disturbing the functions of the others. When digestion is imperfectly performed, the functions of the intestinal canal will soon participate in the disorder of the stomach. Under these circumstances, the secretion of bile will also probably become irregular. Should disease commence in the large intestines, as about the rectum, it disturbs the functions of the stomach, and secretion of the liver, and becomes augmented in its turn by its sympathy with these parts. Should the liver be disordered in the first instance, the stomach and bowels may not immediately sympathize, although they will probably soon become affected.

I feel

I feel further warranted in considering the symptoms, which have been recited in the former part of this paper, as arising from a general disturbance of the functions of the digestive organs, from contemplating the effects of blows on different parts of the belly, which do not seem to have injured the structure of any single abdominal viscus, but yet produce effects denoting a general disorder of these organs. The symptoms have varied in severity in proportion to the violence of the blow received. In the cases which were the consequence of the more forcible injuries the symptoms were, a furred tongue; great vomiting, so that the stomach could retain no food; difficulty of affecting the bowels by medicine; great fever; and even delirium. Indeed, all those effects were produced, which I have represented as arising from vehement local irritation of remote parts of the body. The disorder has generally terminated by a profuse discharge of black and fetid stools, after which the patient has perfectly recovered: On the contrary, where the symptoms consequent on the blow have been less violent, so as not to claim such strict attention, the

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disorder has continued. Persons who had been previously in perfect health, have become hypochondriacal, and have had all those symptoms of disorder of the digestive organs, which have been already enumerated as arising from a less degree of local irritation, with such consequent diseases as originate from such disorder, and which will be mentioned in the subsequent part of this paper.

In order to enquire more particularly into the nature of this disorder of the digestive organs, I have examined the bodies of a considerable number of persons who have died of diseased joints, lumbar abscesses, and other great local diseases. I knew that these patients had their digestive organs disordered in the manner that I have described, and that in many of them the secretion of bile had been suppressed for a great length of time, and, when it was renewed, that it was very deficient in quantity, and faulty in quality: yet, on dissection, no alteration was discovered in the structure of the chylopoietic viscera, which could be decidedly pronounced to be the effect of disease It naturally excites sur-

prise, that such a state of irritation, and imperfect performance of the natural functions of these parts, should exist for so long a time, as in many cases it is known to do, without producing organic disease; still I believe it may be set down as a truth, (which has been verified by every observation I have made,) that a state of irritation leads to those diseased vascular actions, which produce an alteration of structure in the irritated parts.

However, where the disordered state of the bowels had been of longer duration, I have found the villous coat of the intestines swoln, pulpy, turgid with blood, and apparently inflamed, and sometimes ulcerated; and these appearances have been most manifest in the large intestines. Having observed repeatedly in dissections of these cases, that the large intestines were more diseased than the small ones, it occurred to me, that the fact might be accounted for in the following manner: If digestion is incomplete, the undigested food must be liable to chemical changes, and the products resulting from this cause, are likely

likely to be most stimulating to the large intestines. Indeed, in advanced stages of this disorder, mucus and jelly tinged with blood are discharged, and it seems probable that a kind of chronic dysentery may be thus induced.

In some instances, where the disorder had existed for many years, the bowels have been diseased throughout their substance; the internal coat being ulcerated, and the peritoneal covering inflamed, so that the convolutions of the intestines were agglutinated to each other. In these cases the liver, and sometimes the spleen also, were much diseased, being tuberculated in every part. Such is the result of the information which I have obtained by dissection.

Accurate attention to the subject, especially in medical cases, may lead to important subdivisions, which I have not yet been able to make. But when I find that irritation of the nervous system, however it may originate, deranges the chylopoietic organs, and affects the stomach, bowels, and liver, apparently at the

the same time, I think it fair to infer, that these organs are equally operated on by the same cause. Disorders of the brain may affect the chylopoietic organs; and it is well known that this influence is reciprocal. The stomach is said to be chiefly concerned in producing these effects; but the causes of the sympathetic affection are probably more general. A fit of passion has produced jaundice; and the irritation of teething in children frequently suspends the secretion of bile; so that the stools are not in the least degree tinged with that fluid. If the head can thus affect the liver, it is reasonable to infer, that the liver may reciprocally affect the head. It is very difficult to form an opinion relative to this subject; for, in the instances which have been mentioned, the affection of the liver may take place, only because it forms a part of the digestive organs, and not from a direct sympathy existing between it and the head. Still, however, I do not think it unreasonable to conclude that irritation of the other chylopoietic organs may, as well as that of the stomach, disorder the source of sensation.

 To

To display how much hepatic irritation may affect the sensorium, and consequently the whole nervous system, I insert the following case:

CASE II.

A gentleman applied to me with a thickened and tender state of the periosteum of his tibia. This disease had troubled him for more than a year, but became at last so extremely painful that he declared he had not slept for three months, and that his life was so intolerable that he resolved to undergo a course of mercury, even though in the opinion of those surgeons whom he had consulted, his disease was not venereal. The duration of the disease, as it had made no greater progress, induced me to coincide in the opinion which had been given him. His tongue was much furred, his appetite was moderate, and he was not conscious that his digestion was otherwise than good. His bowels were perfectly regular. I desired him to take five grains of the pilul. hydrarg. every second night; but before he took them to remark the colour of the discharges from his bowels, and to observe whether the medicine produced

any

any change of it. In a week's time he called upon me, and said, I come to tell you the strangest thing that perhaps you ever heard, which is, that I actually do not know the precise spot where the lump on my shin was situated, and doubtless these pills which you directed are a most wonderful compound of opium. The first gave me sleep, which I had not had for three months. After taking a second, I have slept soundly all night, and feel myself alert in the day. Every other preparation of opium, which I have taken, failed in producing sleep, and made me ill during the succeeding day. After all, continued he, it cannot be the pills that have made me well, for they have had no perceptible effect on me. I asked him, had he, as I requested him, remarked the colour of the alvine discharges? He replied, he had, and that before he took the medicine they were (to use the patient's own words) as black as his hat, and now they were of the colour of a ripe Seville orange. The great relief arising from the correction of the biliary secretion was not to me so strange, as the patient expected. It is doubtless such remarks that have impressed some medical men with the

 opinion,

opinion, that the liver was the root of the evil in all disorders of the digestive organs.

Cases like the present, (and several similar ones will be found recorded in this work,) appear to me highly valuable on many accounts. They shew that hepatic disorder may disturb the sensorium, either immediately, or intermediately, by disordering other organs concerned in digestion; they shew how disorders of the abdominal viscera may become the cause of various other diseases, by disturbing the source of sensation and nervous energy; and they further shew that unirritating and undebilitating doses of mercury have, probably by their local action in the bowels, a great influence in correcting the secretion of bile, and by this means of relieving hepatic irritation*.

Nothing

* To shew how stomachic irritation may induce or maintain a general disturbed state of the nervous system, I shall briefly relate the chief circumstances of a disorder which occurred in my own person. Having, in consequence of dissection, had some morbific animal matter imbibed from a cut on my finger, I suffered at first from severe fever, which subsiding left me much indisposed. I then became subject, occasionally, to considerable and painful

Nothing in pathology is more generally admitted, than the reciprocal operation of disorders of the head and of the digestive organs

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painful ulcerations of my throat, and to severe rheumatic pains, which almost prevented me from going about: These symptoms left me in the summer, and returned in the winter during three succeeding years. In the second winter, when their recurrence seemed to have arisen in consequence of catching cold, the rheumatic symptoms rendered me almost a cripple for three months; nor were they mitigated by any medicine which I took. Exercise on horseback relieved them in a very great degree. I could not exercise on foot, for the plantar fasciæ were affected, as were my ankles, knees, elbows, and the muscles of my back. During the whole of this illness I had no appetite, yet I eat food when it was put on the table. The want of appetite excited no surprize; for I thought it was a natural consequence of general indisposition. At the end of three months, I one day felt sick at stomach, for about an hour, but not to that degree as to induce vomiting, and whilst this sensation continued I had not the slightest rheumatic pain about me. I now resolved not to eat till my appetite returned, and even then I gratified it very sparingly, eating only vegetable food and drinking only water. In one week my appetite became keen, my digestion easy, my stomach tranquil, and I was as free from rheumatism, (a disorder to which I never had been subject,) as at any period of my life. It is also sufficiently manifest how much uncomfortable feelings of the bowels affect the nervous system, and how immediately and completely the general disorder is relieved by an alvine evacuation.

on each other; yet the exceptions to this general rule deserve to be remarked in a comprehensive examination of the subject. Some persons have great disorder of the digestive organs, without any apparent affection of the nervous system; and even diseases of a fatal nature may take place in the former organs without affecting the latter. Indeed, if we examine any of the most evidently sympathetic affections, we shall find the same exceptions. The stomach generally sympathizes with disorder of the uterus, but it does not invariably do so.

Many of the symptoms recorded in the description of the state of health of those persons who are affected by disorder in the digestive organs, denote a disturbance of the nervous and muscular powers. When we observe this compound disorder we can seldom determine which were the primarily affected organs. General nervous irritation may have preceded the disorder of the stomach and bowels, or may have been caused by it. The history will generally shew, that the derangement of the digestive organs is secondary. When it arises from local irritation, it can be

be produced only through the medium of the sensorium. When it is idiopathic, it frequently originates in causes which affect the nervous system primarily; such as anxiety, too great exertion of mind or body, and impure air. Sedentary habits and irregularities of diet are causes which may be supposed to act locally on the organs themselves. Nervous irritability and weakness are not perhaps susceptible of a direct cure by medicine; but the disorders of the digestive organs are more corrigible by medical remedies. In practice, these require our chief attention; and if their disorders be corrected, all nervous irritation frequently ceases, and health is restored. In many instances the nervous irritation, which has induced the disease, is trivial, and would soon cease, were it not kept up by the reaction of its secondary symptoms.

Whether this disorder of the digestive organs be primary or secondary, it generally produces irritation in the brain; and thus may cause in many instances actual disease of that organ, as will be stated in the conclusion of this paper. But derangement of the digestive organs arises, in many cases, from esta-

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blished nervous disorder: indeed there is often reason to suppose that it is dependent on, or connected with, actual disease of the brain. In such cases, the correction of the disordered functions of the digestive organs cannot be accomplished; and even if it were practicable, it would not cure the nervous disease. It is however highly necessary and advantageous to attend to the disorder of the digestive organs, where it is only a symptom of nervous disease. The relief of the former will often mitigate, though it cannot cure the latter *.

The

* The ingenious Mr. John Bell has of late published an opinion, that all nervous disorders depend on the circulation of blood in the brain. The opinion is founded on this dogma; the brain being insensible, there can be no such thing as nervous irritation. Believing similar opinions to be prevalent in the profession, I think it worth enquiring, whether, if the motion of a worm in the stomach produces temporary blindness or convulsions, there be not some nervous irritation? If a man has his leg amputated on account of a compound fracture, and afterwards becomes delirious and dies; I grant that fullness of the vessels of the head will be found on dissection; but was not the vascular action caused by preceding nervous irritation? The same fullness of vessels and signs of inflammation are found in those who die of fevers; but do not the miasmata

The connexion of local disease with general disorder has been often remarked; it has been formerly attributed to impurity of the fluids; a theory which is not irrational. Imperfect digestion must influence the qualities of the blood, and all parts of the body may be affected from this source. But in accounting for the reciprocal influence of disorders of the head and the digestive organs on each other, the modern explanation of these phænomena, by means of sympathies, is perhaps preferable. Afflicting intelligence will destroy the appetite and produce a white tongue in a healthy person; and a blow on the stomach disorders the head. These phænomena take place independently of the blood, and can only be explained by admitting that disturbance of one organ immediately affects another.

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miasmata which cause them affect the brain, and suddenly impair and disturb its energy, and is not then the vascular action a consequence? I would ask too, practically, does blood-letting cure disorders in which there is a fullness of the vessels of the head? It must be granted, that in many instances it temporarily alleviates them, but in others it fails to relieve and even aggravates them.

The

The writings of the ancients abound with passages, in which local diseases are attributed to affections of the abdominal viscera, and the same fact has been noticed by several of the moderns. The French surgeons appear to be very solicitous to keep the bowels in a cool and tranquil state; and Dessault ascribes the origin of erysipelas to a bilious cause. The German surgeons, Richter and Schmucker, attribute many local diseases to gastric affections; and in Italy, Scarpa views the subject in the same light. The English practitioners seem to have been less attentive to this class of disorders; insomuch that Fischer, a German, who published an account of the state of medicine in this country, expresses his surprise that the English should be so little acquainted with gastric diseases. I know not exactly what ideas these gentlemen may annex to the terms gastric and bilious disorders, since they do not particularly describe them. I have represented the subject in the foregoing pages, as it has appeared to me on the most attentive examination.

There is also an excellent dissertation, in which

which the effects and treatment of disorders of the digestive organs are particularly described, inserted in the eighth volume of the Memoires de la Société Royale de Medicine of Paris for the year 1806, at page 310, entitled Reflections sur le Traitment de la Manie atrabílaire comparé a celui de plusieurs autres Maladies chroniques, & sur les Avantages de la Methode evacuante, par M. Hallé. After describing the discharges from the bowels in atrabiliary mania, he observes, that a similar state of those organs is found in other diseases, namely dropsy, hypocondriasis, accompanied with difficulty of breathing and palpitation, obstinate coughs, and a great number of very different diseases; to all of which the same treatment is applicable. That the extremely prejudicial consequences of disorders of the stomach and bowels have been noticed at all times by persons of observation, and particularly by those who are in the habit of judging of their state by their excretions, is sufficiently evident. The antients sought to correct the error by purging with hellebore, and the moderns by more compound purges, to use the words of M. Hallé,

par

par le mélange de purgatifs résineux & des mercuriaux. I have not, however, met with any physiological investigation of the nature of these diseases, nor of the rational objects of cure. It is to promote such an investigation, that I have laid before the public the facts which have come under my observation, and the reflections to which they have given rise.

In investigating the connexion between local diseases and disorder of the health in general, I can perceive, that failure in the functions and irritation of the digestive organs may act prejudicially on the system in general in various ways. They may produce weakness, for strength and vigour seem to arise from the conversion of our food into perfect blood. They may produce an impure state of that fluid, and they may produce great irritation of the brain; and thus influence the whole body. However, what I have to observe respecting the causes and cure of local diseases will be most properly introduced and best understood after the cases have been recorded, upon which the opinions have been founded.

The

The result of all these observations, which I have been able to make, relative to this subject, has induced me to believe that the disorder of the digestive organs, caused by the various circumstances which have been recited, consists in a weakness and irritability of the affected parts, accompanied by a deficiency or depravity of the fluids secreted by them, and upon the healthy qualities of which the due performance of their functions seems to depend. This opinion is deduced immediately from the consideration of the symptoms, and confirmed by all the collateral evidence, which we can collect. The duration of the affection, without fatal consequences, shews that it is a disorder of functions, and not a disease of structure. Dissections confirm the opinion. Blows which excite general irritation of the digestive organs, produce also the symptoms which characterize the like disorder, when it arises from nervous irritation, or is excited by intemperance. I doubt not but every one will, on reflection, consider the disorders of the digestive organs to be of the first importance, and will perceive the propriety of diligently

enquiring

enquiring into their nature, that we may know them when they exist, and that our attempts to remedy them may be conducted on rational principles. This consideration will, I trust, vindicate me for employing so much time in an investigation which, perhaps, some may consider as tedious and un[illegible]table.

Occasional Effects of Disorder of the digestive Organs.

It is generally admitted, that disorders of the chylopoietic viscera will affect the source of sensation, and consequently the whole body; but the variety of diseases, which may result from this cause, has not been duly weighed and reflected on.

It may produce in the nervous system a diminution of the functions of the brain, or a state of excitation, causing delirium; partial nervous inactivity and insensibility, or the opposite state of irritation and pain. It may produce in the muscular system, weakness, tremors, and palsy; or the contrary

 affec-

affections of spasm and convulsions. It may excite fever by disturbing the actions of the sanguiferous system; and cause various local diseases by the nervous irritation which it produces, and by the weakness which is consequent on nervous disorder or imperfect chylification. Or if local diseases occur in a constitution deranged in the manner which I have described, they will become peculiar in their nature and progress, and difficult of cure. Affections of all those parts which have a continuity of surface with the stomach; as the throat, mouth, lips, skin, eyes, nose, and ears, may be originally caused or aggravated by this complaint. I must observe, before I proceed to the relation of cases, that such a disorder of the digestive organs as I have described existed in every instance. I do not take upon myself to say that it was the primary cause of the general derangement of the constitution, with which the local disease appeared to be connected; it might have been the consequence, as indeed has been stated in these preliminary observations.

Treatment.

I shall now proceed to mention the plan which

which I have pursued in the treatment of these disorders, when they have been connected with surgical diseases: with what degree of success, the following cases will demonstrate. I do not feel altogether competent to give full directions relative to this subject; because I have never attended to medical cases with that degree of observation which would lead me properly to appreciate the efficacy of different medicines, when administered either in their simple or compounded forms. The subject is so important, that the public would be highly indebted to any practitioner, who would point out the varieties of these diseases, and the appropriate modes of cure. The method of treatment, which I have adopted, is simple, and founded on the opinions I have formed of the nature of the disease, and on physiological views of the functions of the affected organs. Believing the disordered parts to be in a state of weakness and of irritability, my object has been, to diminish the former and allay the latter. Believing also that the secretions into the stomach and bowels, upon the healthy state of which the due perfor-

mance of their functions depends, were, in consequence of such disorder, either deficient in quantity or depraved in quality; I have endeavoured to excite, by means of medicine, a more copious and healthy secretion.

It is a principal object of medicine to give strength and tranquillity to the system at large, which must have a beneficial influence on all its parts, and greatly promote the well-doing of every local disease. We cannot reasonably expect tranquillity of the nervous system whilst there is disorder of the digestive organs. As we can perceive no permanent source of strength but from the digestion of our food, it becomes important on this account that we should attend to its quantity, quality, and the periods of taking it, with a view to ensure its perfect digestion.

First, With respect to quantity: There can be no advantage in putting more food into the stomach than it is competent to digest, for the surplus can never afford nourishment to the body; on the contrary, it will be productive of various evils. Being

in a warm and moist place, the undigested food will undergo those chemical changes natural to dead vegetable and animal matter: The vegetable food will ferment and become acid, the animal will grow rancid and putrid; this is only rendered evident occasionally, when a disordered stomach rejects some of its contents; then the teeth are roughened and set on edge by the corrosive qualities of the acid, and the throat feels burnt by the acrimony of the rancid oil. These effects though occasionally made apparent must constantly take place, unless by the digestive powers of the stomach the food is converted into a new substance which is not liable to these chemical changes. Such new and irritating compounds may not indeed materially injure a healthy stomach, but cannot fail to be detrimental to one that is weak and irritable, as well as to the whole tract of the alimentary canal, and thus maintain and aggravate its disorder. Part of the food thus changed will be imbibed from the bowels, and render the blood impure from which there is no outlet for various kinds of matter but through the kidnies; and this may prove a

cause

cause of foul urine, as well as of the presence of many substances in that fluid not natural to it, and be productive of serious diseases in the urinary organs. Observing the evils resulting from undigested aliment, we surely ought cautiously to guard against them by proportioning the quantity of our food to the digestive powers. Nature seems to have formed animals to live and enjoy health upon a scanty and precarious supply of food; but man in civilized society, having food always at command, and finding gratification from its taste, and a temporary hilarity and energy result from the excitement of his stomach, which he can at pleasure produce, eats and drinks an enormous deal more than is necessary for his wants or welfare; he fills his stomach and bowels with food which actually putrifies in those organs; he fills also his blood vessels till he oppresses them, and induces diseases in them as well as in his heart. If his digestion be imperfect he fills them with unassimilated substances from which nutriment cannot be drawn, and which must be injurious. In proportion as the powers of the stomach are weak, so ought we to di-

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minish the quantity of our food, and take care that it should be as nutritive and easy of digestion as possible. By adopting an abstinent plan of diet even to a degree that produces a sensation of want in the system, we do that which is most likely to create appetite and increase the powers of digestion. In how great a degree want effects these objects, is evident in those who have been obliged to fast from necessity, or have been much reduced by hæmorrhage.

Secondly, As to quality: It is not my intention to discuss the question as to the nature of the food proper for mankind. When the stomach is weak, it seems particularly necessary that it should be nutritive and easy of digestion. I may further observe, that its qualities should be adapted to the feelings of the stomach. In proof of this proposition, numerous instances might be mentioned of apparently unfit substances agreeing with the stomach, being digested and even quieting an irritable state of stomach, merely because they were suitable to its feelings. Instances might also be mentioned

mentioned of changes in diet producing a tranquil and healthy state of stomach in cases where medicines had been tried in vain. Neither can such occurrences excite surprise, for as digestion and the consequent tranquillity of the stomach depends on a proper quantity of healthy juices being secreted and commixed with the food, such secretions are likely to be produced by whatever agreeably excites it, and obstructed by whatever has a contrary tendency.

Thirdly, As to the times of taking food: It is evidently the intention of nature that we should put into the stomach a certain portion of food, the excitement of which inducing a secretion of gastric fluid, by its action becomes digested. This office of the stomach being effected, it should be left in a state of repose till its powers are restored and accumulated, and this return of energy would in health be denoted by a return of appetite. It is probable that three hours may elapse in health before the digestion of a moderate meal is effected, so that the stomach is empty and in a state of re-

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pose. It is therefore reasonable to allot the same portion of time for the same purpose when the organ is disordered, whilst we have diminished the quantity of our food in order to proportion it to the diminished powers of the organ; yet instead of pursuing this rational plan of diet, many persons are taking food every third or fourth hour, pleading in excuse for such conduct that they cannot do without it. The truth is, that when the stomach is disordered, the exertion of digesting a single meal after its excitement and efforts have ceased, is productive of sensations of languor, sinking and inquietude, which ought to be calmed or counteracted by medicines and not by food, for a second meal cannot be digested in this state of the stomach. We also often teaze and disorder our stomachs by fasting for too long a period; and when we have thus brought on what I may call a discontented state of the organ, unfitting it for its office, we sit to a meal, and fill it to its utmost, regardless of its powers or its feelings. The rules then for diet may be thus summarily expressed: We should proportion the quantity of food to the

 powers

powers of the stomach, adapt its quality to the feelings of the organ, and take it at regular intervals of six or seven hours thrice during the day. It would be well if the public would follow the advice of Mr. Addison, given in the Spectator, of reading the writings of L. Cornaro, who having naturally a weak constitution, which he seemed to have ruined by intemperance, so that he was expected to die at the age of thirty-five, did at that period adopt a strict regimen, allowing himself only twelve ounces of food daily. By this plan of diet he lived to more than one hundred years; and it is delightful to observe the tranquil, cheerful and energetic state of mind accompanying his bodily health, and in a great degree induced by it. Cornaro found that as the powers of his stomach declined with the powers of life in general, that it was necessary he should diminish the quantity of his food, and by so doing he retained to the last the feelings of health.

Every thing which we take into the stomach, except food, may be considered in

two points of view; either as a diluent or a medicine. Water is the only diluent, and we are in the habit of mixing alimentary matter and stimulants with it. Diluents probably ought not to be taken during or immediately after our meals, since they would be likely to render the juices of the stomach less efficacious in the digestion of our food. Hunger and thirst seem to be incompatible sensations: an hungry animal would eat to satiety, and the stimulus of the food would bring on a discharge of the juices of the stomach, which have the power of digesting the food; and it is not probable that the sensation of thirst would be experienced till this operation of the stomach is effected. If the sensation of thirst then occurred, water would appease it, without frustrating the digestive functions, and being absorbed; from the alimentary canal a certain portion of it would be furnished to the blood, and the surplus would pass off from the skin, lungs and kidnies. All stimulants must be regarded as medicines; vinous liquors are of this class, and being suitable to the feelings of the stomach, are in many cases very efficacious,

efficacious, yet they are very liable quickly to pass into a state of acetous fermentation, and to promote that change in the remaining quantity of the vegetable matter contained in a disordered stomach, and thus produce a strong and injurious acid. The rule for taking vinous liquors in persons to whom habit has rendered them necessary, may be thus briefly stated. They should not take them during their meals, lest the temporary excitement they produce should induce them to take more food than the powers of the stomach are capable of digesting, but afterwards they may be allowed so much of them as may be required to induce agreeable feelings, or to express the fact more clearly, as is necessary to prevent those uncomfortable sensations which the want of them may occasion; and it may be added, the less they take the better. People deceive themselves on this point. A disordered stomach will feel uncomfortable after eating; fermented liquors remove for a time the unpleasant sensations. Potion after potion is swallowed on this account, often without producing permanent tranquillity, and much to the injury of the stomach.

stomach. Wine drinkers do not drink wine after every meal, which proves that wine is not necessary to their digestion; and many who confided in this belief have been convinced of their error, by leaving it off and finding that they digested their food as well when deprived of it, and that such privation greatly contributed to their eventual restoration to health. When stimulants seem requisite, and fermented liquors run into the acetous fermentation in the stomach, spicy and aromatic vegetables should be substituted, such as ginger, pepper, mustard, &c.

Stomachic medicines are given to strengthen a weak stomach, to tranquillize an irritable one, or to counteract some morbid peculiarity in the feelings and actions of that organ. There is a time when stomachic medicines seem to be particularly required. About three hours after a meal, when the stomach is exhausted by the labour of digestion, when its morbid propensities are increased by the languor consequent to fatigue; at this period, when persons are in the habit, through

through ignorance, of taking food to appease their distress, they ought, as has been said, to take these kinds of medicines.

Even our food must however be considered as exerting a medicinal influence in disorders of the stomach, when that organ is irritable. A vegetable diet and abstinence from fermented liquors may tend to tranquillize it. On the contrary, when it is weak as well as irritable, that aliment which is most readily digested is to be preferred, and cordials are sometimes beneficial. The effects of food and medicine can never be considered as resulting from their operation on the stomach solely, but from their conjoint influence upon the nervous system in general. Irritability of the stomach may arise from that of the brain, and unstimulating diet may tend to tranquillize the latter organ, and thereby alleviate the disorder of the former. On the contrary, a more generous diet may, by exciting the nervous system, produce that degree of energy in its actions, which invigorates the stomach, and tranquillizes its disorder. It

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may further be observed in some cases, that the kind of medicines or diet which is serviceable to the stomach, may aggravate the nervous disorder; and on the contrary, that those means which seem to tranquillize nervous irritation tend to diminish the powers of the stomach.

Bark and steel are not uncommonly given in these diseases to increase the powers of the stomach: they ought I think, to be administered in small doses, and never when the tongue is dry; as they seem to suppress those secretions, which in many cases are already deficient; and the increase of which would tend to relieve irritation in the affected organs. I mention this opinion, however, rather to account to the reader for these medicines not having been prescribed in the subsequent cases, than from any other motive; as I do not feel perfectly competent to decide upon their degree or kind of utility.

Vegetable diet-drinks appear to me very useful in tranquillizing and correcting dis-

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orders of the stomach and bowels, for this is the manner in which they seem to be efficacious in the cure of local diseases. The vegetables prescribed in the different formulæ are so dissimilar, that we can scarcely suppose that they act specifically upon the local disease. Even sweet-wort has obtained considerable celebrity. When diet drinks fail to correct the disorders of the digestive organs, they also fail to produce any amendment on local diseases. Such observations have induced me to believe that they have the utility, which I have ascribed to them, of tranquillizing and correcting disorders of the stomach and bowels. It is allowable to form an opinion from such observations, though I am sensible of their invalidity as arguments to prove its truth.

Whilst thus on the one hand, by endeavouring exactly to proportion the quantity of food to the powers of digestion, by adopting an abstinent system of diet, and taking medicines suitable to the condition of the stomach, we endeavour to foster the powers and ensure the tranquillity of this important organ,

organ, we ought on the other most carefully to attend to the regulation of the action of the bowels, with a view to insure their tranquillity; for the state of one part of the canal will be regulated by the state of health or disease in the other. To produce tranquillity of the bowels when they are in a disordered state, it is necessary that the residue of the food be daily carried down and discharged from those organs; this is their natural function, and if they fail in its performance, they should be excited by appropriate medicines, yet without teazing them so as to induce what is ordinarily called purging. Purging, occurring spontaneously, shews that the bowels are irritable, and the aqueous and other discharges which take place from them in that condition often relieves their irritability. When purging occurs in consequence of taking medicine, it shews that the bowels have been irritated and have relieved themselves in their usual manner. Persons may be purged without having their bowels cleared of the fœcal matter which may be detained in them; we should therefore endeavour to ascertain what kind or combina-

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tion of purgative medicines will excite a healthy action of the bowels, without teazing them or producing discharges from the organs themselves. The best mode of proportioning the degree of excitement to the end designed is to take a dose of a suitable medicine at night, but short of that which may prove irritating; if it fails sufficiently to excite the organs, a similar dose may be taken in the morning; which also failing, it may be repeated at an advanced period of the day.

Purging medicines sometimes relieve unpleasant sensations; but they do not in general produce even this effect; and all active purges seem to me to increase disorder. It is natural to suppose that strong stimuli will aggravate the unhealthy condition of weak and irritable parts.

I have already expressed my opinion of the manner in which the continuance of purgative medicines, in such doses as do not immediately purge, relieve disorders of the digestive organs, by producing morbid secretions which afford considerable relief, both when they

they occur spontaneously or are thus induced This plan of practice is what Dr. Hamilton has suggested, and the utility of which he has so successfully elucidated. I am aware that laxative medicines may relieve irritation merely by augmenting the natural secretions of the viscera, and thus unloading their vessels; and also by determining the fluids from the head, when the nervous symptoms are aggravated by a plenitude of the vessels of the brain. As I have found the lenient plan of treatment (that of exciting the peristaltic action of the bowels, so as to induce them to clear out the whole of the residue of the food; without irritating them, so as to produce what is ordinarily called purging) particularly successful, I have rarely deviated from it. I am not, therefore, warranted from experience in speaking decisively respecting the more free use of purgative medicines.

It is difficult, in many cases, to regulate the actions of the bowels either by diet or medicine.. They are costive for a time, and then fits of purging come on. The former state

state must be obviated in order to prevent the latter. Medicines which excite a healthy action of the bowels in one person, are either inert or too active in another. Doses, which would have no effect in a state of health, become purgative in this disorder; a circumstance which shews that the bowels are irritable. There are some rare instances of the contrary, in which it is exceedingly difficult to excite the actions and secretions of these viscera.

I have found in some cases, that purgative medicines and spices dissolved in spirit and water, have answered better than any thing else, in producing a sufficient, but not too copious discharge from the bowels. Equal parts of compound tincture of rhubarb and senna is the formula to which I allude. When irritation in the large intestines has been denoted by the mixture of mucus and jelly with the fæces, and sudden and urgent calls to void them, I have advised oily and mucilaginous medicines as aperients: as castor oil, mixed with a large proportion of mucilage. My sole object, however, has

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been to regulate the state of the bowels; and when they have been regular without medicine, I have rarely recommended any.

At the same time, I have not been inattentive to the error in the biliary secretion, which exists in the greater number of these cases. I have endeavoured to correct this error by the administration of such small doses of mercury, as do not irritate the bowels, and are not likely to affect the constitution, even though persevered in for a considerable time. In this state of the digestive organs, calomel, in small quantities, sometimes proves irritating. I have combined it, as in Plummer's pill, and have given one grain every other night. Where this dose produced uneasy sensations, or acted as an aperient, five grains of the pil. hydrarg. were substituted in its place; and even this quantity has been diminished in some cases. When the bowels are very irritable, the hydrarg. c cretâ has been given *. When it appeared necessary, on

* I have mentioned in the second part of these observations, that the pilul. hydrarg. are very uncertain in their effects.

on account of the biliary secretion, and when the calomel did not irritate the bowels, I have increased the dose. The relief, which arises from the increase or correction of the biliary secretion, in a great number of these cases, shews how much the liver is concerned in causing or aggravating the symptoms in these diseases.

There are numerous and undoubted proofs of the utility of mercury, in correcting and augmenting the biliary secretion; but the mode of administering it has not, perhaps, been sufficiently attended to. I have known patients, who had voided nothing but blackish stools for some months, discharge fæces of a light yellow colour, denoting a healthy,

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effects. Some of the students at the hospital, on examining them, and different parcels of the conserve of roses, say, that sulphuric acid may be discovered in each. Nor is it improbable, that, in making the conserve for sale, some of this acid may be added to brighten its colour; and if so the pilul. hydrarg. which are made from it may contain, in varying proportions, some of that highly deleterious compound the sulphat of quicksilver.

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but deficient secretion of bile, upon taking such small doses of mercury. The effect of this change on the constitution and spirits has been surprisingly great; though the state of the stomach did not appear to be altered. The use of mercury by inunction, sometimes acts beneficially, in correcting the biliary secretion; but if the constitution be irritated, and weakened by that medicine, the actions of the liver are disturbed; and the digestive organs in general, become deranged. Mercury, in my opinion, acts most certainly and efficaciously, when taken into the bowels, and a much smaller quantity will suffice, when its application is in this manner rendered chiefly local.

Facts are wanting, to enable us to ascertain, whether mercury meliorates and augments the secretions of the other digestive organs, as it does that of the liver. The stomach frequently appears worse during its employment, whilst the stools are considerably better; I have, in such cases, discontinued the medicine, and returned to it again if the state of the liver made it necessary. When benefit

benefit is obtained from a small quantity of medicine, we naturally expect an increased advantage from an augmented dose; this is so natural an error, that an admonition against it appears necessary. I have observed in some instances, where small doses of mercury have unexpectedly affected the mouth, that considerable benefit seemed to arise from this circumstance. Yet it is wrong, in general, to augment the dose of the medicine, so as to create even local irritation in the bowels by it. The various effects of mercury in disorders of the digestive organs cannot, I think, be understood, but by considering, not merely its local operation on these organs, but also its action on the constitution at large. When we see the biliary secretion corrected by a few grains of the pilul. hydrarg., as in the second case, we cannot but believe its action to be local. When the medicine is given in larger doses, it exerts an influence on the whole constitution, and alters the state of the nervous system. It thus controuls diseases dependant on an irritable and disturbed state of the nervous functions: this I think I shall be able

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to shew by cases related in that part of this book which treats on diseases induced by the absorption of morbific animal poisons; and thus mercury may relieve disorders of the digestive organs by relieving the nervous disorder which caused them. But when mercury is given in still larger doses, as it is for the cure of syphilis, it never fails to irritate and weaken the constitution, and thus to disorder the digestive organs. Persons who are salivated have, as far as I have remarked, the functions of the liver and digestive organs constantly disturbed by that process. I cannot, therefore, but think that it is wrong to use mercury in hepatic affections to that extent, which would disorder the functions of the liver, if they were previously healthy. In the majority of cases the disorder has existed for a long time, and has become habitual; therefore it is not likely to be cured suddenly. For this reason, we should adapt our treatment to the more rational expectation of effecting a gradual recovery than a sudden cure. The most judicious treatment will not remedy the disease, if the exciting causes continue

continue to operate; such as improprieties of diet, agitation of mind, sedentary habits, or impure air.

Although experience has made me think very highly of the efficacy of small doses of mercury, in exciting and correcting the biliary secretion; yet it ought to be mentioned, that in some few cases, this medicine fails to produce its usual effects, and that the biliary secretion becomes healthy without its administration. Nor is this surprising, for in general disorders of the digestive organs, one organ is more disordered than the rest, and appears to have been the cause of the whole affection. Thus the liver may disturb the functions of the stomach and bowels, or it may be disturbed by them.

The following cases will afford sufficient testimony of the efficacy of such simple treatment as I have recommended, and which appears to be well adapted to gradually restoring the healthy actions of the digestive organs in cases of chronic disorder and disease. The treatment must be considered very deficient, as

a general account of what can be effected by medicine. In acute disorders of the digestive organs, we know that nauseating medicines by exciting the secretions, often relieve stomachic irritation, and that emetics and other remedies which suddenly and powerfully affect the stomach, produce great changes in the state of that organ and of the nervous system, as well as correspondent alterations in local diseases. In some inveterate cases, apparently depending on established nervous disorder, this simple treatment has been ineffectual. Under such circumstances, the nervous affection appears to require the principal attention.

In investigating the treatment of these disorders, it is necessary to ascertain, not only what medicine is beneficial, but also what change it produces in the circumstances of the disorder. The administration of a medicine may in one case be succeeded by a discharge of bile, and a striking relief from long-continued and distressful feelings: yet the same medicine may be given in many other instances without the same consequence.

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Was the change, then, in this instance accidental? or must it be attributed to some unnoticed peculiarity in the disease or constitution?

I have generally explained to the patients the objects which I had in view, in correcting disorders of the digestive organs, by saying that there are three things which I consider as right and necessary to the cure of disorder. First, that the stomach should thoroughly digest all the food that is put into it. The patient perceiving the necessity of obtaining this end, becomes attentive to his diet, and observes the effect which the quantity and quality of his food and medicines have upon his feelings, and the apparent powers of his stomach. Secondly, that the residue of the food should be daily discharged from the bowels: here too, the patient apprized of the design, notes what kind and dose of purgative medicine best effect the intention; and whether it answers better if taken at once, or at intervals. Thirdly, that the secretion of bile should be right, both with respect to quantity and quality. In

In cases wherein the secretion of bile has been for a long time deficient or faulty, I recommend, as I have said, unirritating and undebilitating doses of mercury to be taken every second or third night, till the stools become of the wet rhubarb colour. This mode of exhibiting the medicine has at least the advantage of being innocent, and if months elapse before the object is accomplished we cannot wonder at the tardiness of the cure, when we consider the probable duration of the disorder, prior to our attempts to correct it. The patient is relieved in proportion as the end is accomplished, which feelingly induces him to persevere in such innocent measures. By thus engaging the co-operation of the patient, the practitioner will, in my opinion, derive considerable advantage in the treatment of the case.

Whenever circumstances would permit, I have recommended the patients to take as much exercise as they could, short of producing fatigue; to live much in the open air; and, if possible, not to suffer their minds to be agitated by anxiety, or fatigued by exertion.

ertion. The advantages of exercise in nervous disorders, upon which those of the digestive organs in general so greatly depend, appear to me very striking. It were to be wished that we had some index to denote the strength and irritability of the nervous system, serving as the pulse does with regard to the sanguiferous organs. Perhaps the strength, agility, and indefatigability of the muscles may be regarded as the surest evidence of energy of nervous power and bodily vigour. If this were granted, however, it would follow that many persons, possessing great nervous power, have nevertheless great nervous irritability. Many people, who are extremely irritable and hypocondriacal, and are constantly obliged to take medicines to regulate their bowels whilst they live an inactive life, no longer suffer from nervous irritation, or require aperient medicines, when they use exercise to a degree that would be excessive in ordinary constitutions. The inference which I draw from cases of this description is, that nervous tranquillity is restored in consequence of the superfluous energy being exhausted by its proper channels, the muscles. When, on the contrary,

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the nervous system is weak and irritable, exercise seems equally beneficial; but caution is here requisite as to the degree in which it should be taken. A weak and irritable patient may not be able to walk more than half a mile without nearly fainting with fatigue on the first day of the experiment; but by persevering in the effort, he will be able to undergo considerable muscular exertion without weariness. Does not this imply a considerable increase of bodily strength, and is not the acquisition of strength the chief desideratum in the cure of many disorders? The nervous irritability also when dependant on weakness alone will proportionably diminish with its cause. In the latter case the nervous energy seems to be augmented in consequence of our increasing the demand for it. I am induced to make these observations, from a belief that exercise is not employed as a medical agent, to the extent that its efficacy seems to deserve; of its medical effects I entertain a high opinion; it is however right to direct patients with regard to its use, not to exert themselves for some time previous to a meal, nor

nor for three hours after. I would prescribe to my patients the following rules: They should rise early, when their powers have been refreshed by sleep, and actively exercise themselves in the open air till they felt a slight degree of fatigue; they should rest one hour, then breakfast, and rest three hours, in order that the energies of the constitution should be concentered in the work of digestion; then take active exercise again for two hours, rest one, then taking their dinner they should rest for three hours, exercise two, rest one, and take their third slight meal. I do not allow the state of the weather to be urged as an objection to the prosecution of measures so essential to health, since it is in the power of every one to protect themselves from cold by cloathing, and the exercise may be taken in a chamber with the windows thrown open, by walking actively backwards and forwards as sailors do on ship-board. I also caution patients against sleeping too much; waking from sleep indicates that the bodily powers are refreshed; many persons upon first waking feel alert and disposed to rise, when upon

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taking a second sleep they become lethargic, can scarcely be awakened, and feel oppressed and indisposed to exertion for some time after they have risen. When the disorders which have been the subject of this paper, have been long continued, they do not admit of a speedy cure; hence attention to diet, air, exercise, and mental tranquillity, are more decidedly beneficial than medicines. Surgeons in London meet with frequent and convincing instances of the efficacy of pure air. Patients under the irritation of a local disease, who scarcely eat or sleep in town, recover their appetite, digestion, and sleep, so suddenly on their removal into the country, as to leave no room for doubting, that the change of air has produced this beneficial alteration in their health. The whole of the plan of treatment which is here recommended is so simple, and apparently so inefficient, that its power might reasonably be doubted, did not facts attest its utility. I should not have thought it right to have thus related it in detail, but for the purpose of avoiding repetition in the recital of the cases which are to follow; and also because it

it seemed right to state as explicitly as possible to the younger part of the profession what are the curative intentions in disorders of this nature*.

* After I had written the above account of the treatment which I had found the most successful in the correction of disordered states of the digestive organs, I was much gratified by the perusal of Dr. Hamilton's publication on the Effects of Purgative Medicines. I think there is a great coincidence in the mode of treatment which I have described, and that which is sanctioned by his more extensive experience. He prescribes purgative medicines to act as eccoprotics, to excite but not to stimulate the bowels; and he combines with them generally unirritating doses of mercury. Dr. Hamilton's plan of treating these diseases also accords very much with that of M. Hallé, to whose Memoir I have referred the reader.

CASES.

CASES.

SECTION I.

On Nervous and Muscular Disorders.

LONG before my attention was excited to disorders of the digestive organs, I had remarked that there was a paralytic affection of the lower extremities, resembling that which is produced by a disorder of the medulla spinalis, in consequence of disease of the bodies of the vertebræ. This paralytic affection also appeared to me to vary with the state of the patient's health.

These observations led me to propose a method of treatment, which proved successful in the cases of two young ladies, who were affected in this manner. The issues, which had been ineffectually kept open in the back, were healed; and the state of the health in general was amended by country air, exercise, attention to diet, and a few

simple medicines. The use of the limbs returned in proportion as the health became established. Such were the observations which I had made relative to this subject, when I met with the following cases.

CASE III.

A young lady, whose stomach and bowels were disordered in the manner already described, became gradually affected with weakness of the lower extremities, and pain in the loins. The pain became at length very severe, and was aggravated in a manner almost insupportable by the agitation of a carriage. This lady could scarcely walk, and gave a description of the state of her limbs, so exactly resembling that which is sometimes consequent to diseases of the vertebræ, that I thought it right to examine the spine. I struck with my finger the spinous process of each lumbar vertebra, and upon touching one in particular, the patient complained of great pain; but pressure on the contiguous vertebræ also caused much uneasiness. Under these circumstances I placed a blister on each side of the spine, and kept up a discharge

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from the surface by dressing it with savine cerate. These means, with rest, relieved her sufferings; but, as her health declined, she went into the country, where she soon became much better. The blisters were now suffered to heal, and she shortly afterwards had recovered so much, as to take long rides on a rough-going horse. She returned from the country in good health, and was both muscular and fat. About a year afterwards she was so ill, in the same way, that she wished to have issues made in the back: but I would not consent to this, from knowing that the bone could not be diseased. Of this return of pain in the back, and weakness in the lower extremities, she again got well, upon amendment of her health in general. Since that period, now five years ago, she has been, sometimes very well, at others pale and emaciated; and these changes have corresponded with the natural or deranged state of her bowels.

CASE IV.

I was consulted on the case of a young lady, who had been blistered severely for a pain at the bottom of her back, which was chiefly

chiefly felt at the junction of the ilium and sacrum. It was supposed, that disease had taken place in the bone from some injury, and had affected the sacral nerves: for she could not stand without support, so great was the weakness in the front of the thighs. There was no projection of the vertebræ. If the sacral nerves had been affected, the leg ought to have suffered the greatest share of pain and weakness; but that was not the case. She had no appetite; her tongue was greatly furred; her bowels costive; and pulse generally 110. I strongly objected to making issues in this case; but as the patient's sufferings increased, it was done. She went into the country, and died in four or five months. The bone was found upon examination, to be perfectly healthy; but the mesenteric glands and lungs were diseased, and it was concluded that she died of consumption. I could not learn the state of the liver, nor do I know whether its appearances were particularly attended to.

CASE V.

A young lady had been confined about six months to her chamber, on account of pain

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in the loins, and weakness of the lower extremities, which prevented her from standing or walking. The weakness of her limbs had been gradually increasing for a year and a half, before it became so bad as to make her incapable of moving about. Issues had been kept open during that time, on each side of the spine; but as the patient received no benefit, my opinion was asked respecting the seat of the disease of the bone: for it was concluded, that the issues had only failed from not having been made in the right place. I found, upon inquiry, that the chief seat of her pain was in the posterior edge of the liver. Indeed, that viscus was enlarged, so as to be felt in the epigastric region, and was so tender as to cause much pain on being compressed, at any part, along the cartilages of the ribs. Her tongue was furred; her appetite deficient; digestion bad; bowels costive; and stools black, or else untinged with bile. I had no hesitation in advising, that the issues should be discontinued; and that attention should be chiefly directed to rectify the disorder of the chylopoietic viscera. Mild mercurials and aperients were given, by which,

with other means, she got materially better in health, and was able to walk about as well as ever. The gentleman who attended this patient, met me accidentally, two months afterwards, and informed me that she was quite well. I said, that as her disease had been a long time in forming, it could hardly be expected that she should recover so suddenly. He considered this expression as implying some doubt of his accuracy, and, therefore, sent the patient to me in the morning. She came from Lambeth, in a hackney coach, and looked very well: she observed, that long before her confinement, she could not have borne the agitation of a carriage; but that now, she did not feel it. I have been informed, by several intelligent students, that similar cases have occurred in the hospital: as I was not a witness of these, I shall not relate them. I shall, however, mention one which I saw, and superintended myself, although it is, in some measure, imperfect, as the patient quitted the hospital suddenly, without our knowing where he went to.

CASE VI.

Thomas Crighton, aged twenty-three, was admitted into St. Bartholomew's Hospital, on account of a palsy of his limbs. About a year before, while the use of his limbs was yet unimpaired, he was attacked repeatedly with violent pain in the bowels; uniformly preceded by costiveness, and, generally, terminated by a copious discharge of loose, fetid, black stools. The relief afforded by the diarrhœa was speedy and uniform. In the course of six months his lower extremities became affected with occasional twitchings, and he found that he could not regulate their motions in walking: this increased to such a degree as to make him incapable of taking any exercise. He had, at the commencement of his illness, a confusion of vision; and a constant and violent pain in the head. The former symptom increased so much, that he could discern no object distinctly; a candle, for instance, although held near him, appeared as large as the moon. The sensation of his lower extremities continued perfect; but the actions of the bladder were no longer under the controul of the will; the urine

some-

sometimes flowing involuntarily; and, at others, being retained for some hours, with considerable pain. He afterwards began to lose the use of his upper extremities: the left hand and arm were more affected than the right; but there was no difference in the affection of the leg on the same side. His speech, also, became much impaired; he hesitated and faltered considerably, and the tones of his voice were irregular, so that at length he could scarcely make himself understood. At the time of his admission into the hospital, there was an entire loss of voluntary motion of the lower extremities, and a great diminution of that of the upper. The bowels were deranged; there was constant head-ache; the speech was very indistinct; and vision so imperfect, that he could not read the largest print. An issue was made in the neck, and some medicines were prescribed, under the direction of the physician. As the treatment did not prove beneficial, I was desired to examine the spine, and found such a curvature and projection of the spinous processes of the upper lumbar and lower dorsal vertebræ, that I thought, the bodies of those bones must be

 dis-

diseased. I was therefore, inclined to attribute the paralysis of the lower extremities to this disease of the spine; and, consequently directed, that issues should be made on each side of the projecting vertebræ. As this supposition would not account for the paralytic affection of the parts above, and as the bowels were deranged, I ordered two grains of calomel with eight of rhubarb, to be taken twice a week, and some infusion of gentian with senna, occasionally. After using these medicines, for about three weeks, his bowels became regular, the biliary secretion healthy, and his appetite good. He could move his hands and arms nearly as well as ever; and his eye-sight was so much improved that he could read a newspaper; indeed, it was nearly well. The functions of the bladder were completely restored *; his speech became articulate; and his general health, in every respect, much improved. He remained in the hospital about two months, but with

* I have seen several cases which induce me to believe that the weakness of the sphincter vesicæ, which occasions young persons to void their urine during sleep, very frequently arises from the same cause.

very

very little amendment in the state of the lower extremities, when his friends suddenly removed him, on account of some disagreement with the nurses, and I was unable to learn whither they had conveyed him.

The history of the preceding case was taken by Mr. Cruttwell, now practising as a surgeon in Bath, who had been for several years a most industrious student at the hospital, and whose accurate observation and extensive information induce me to place entire confidence in any statement of a case which I receive from him. To that gentleman I am also indebted for the following particulars relating to a patient, who died some little time ago in the hospital, and whose body was examined. The dissection serves still further to elucidate my present subject.

CASE VII.

Elizabeth Griffin, twenty years of age, was admitted into St. Bartholomew's hospital in August 1805, on account of an inability to move her lower limbs, which was supposed

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to originate from a disease of the spine. On examination, however, there were no appearances, which indicated caries of the vertebræ. Her voice was, at times, considerably affected: and she was subject to occasional attacks resembling in some degree epileptic paroxysms. The affection of the limbs was liable to considerable variations. At times, as she assured me, she could walk across the ward with very little difficulty; at others, she could not even stand without assistance. Her tongue was extremely, and I believe, constantly white; her pulse natural. Her bowels were, generally, costive, and it was necessary to employ active medicines in order to procure stools, which were always of a dark colour. A slight temporary diarrhœa sometimes happened, and she invariably remarked, that the ease or difficulty with which she could walk, and the pain in her head with which she was troubled, were in exact conformity to the state of the bowels, all the symptoms being relieved by the diarrhœa, and returning as the bowels became again costive. There was an appearance of irritability and languor in the eye, which I have before observed in these

cases,

cases, and the pupils were generally much dilated. After the patient had continued in the hospital about seven weeks, she was attacked with fever, and died. To this brief account of the symptoms, I now subjoin the dissection.

No diseased appearances were observed in the brain, though it was examined with the most particular attention: neither was there any disease of the vertebræ. No disease, in short, was observed except in the abdominal viscera. The chief morbid appearance, in them, consisted in an ulcerated state of the villous coat of the ilium near to its termination in the cæcum. The ulcers were numerous, and situated where the mucous glands are chiefly found. The internal coat of the large intestines, also, appeared inflamed.

The liver was healthy in its structure. In the gall bladder about one ounce and a half of a light green serous fluid was found, which had not in the least degree the soapy, or mucaginous feel of bile.

Cases, like those which have been related, are not, if I may judge from my own experience, at all uncommon. They sufficiently prove, in my opinion, that local nervous disorders and muscular debility may arise from a general disorder of the health, in which the digestive organs are chiefly affected. This disorder, as has been ſtated in the preliminary observations, may, sometimes, be the cause, and sometimes the effect, of the nervous affection. In either case, however, its correction is of high importance in the medical treatment of the disease. In the fifth and sixth cases, a disorder of the digestive organs must, I think, be allowed to be the cause of the nervous affection, from the sudden and complete cessation of the latter, when the cure of the former was accomplished. Decisive instances like these are particularly valuable; they shew what great nervous disorder may be produced by that of the digestive organs, and consequently how much the latter disorder is likely to aggravate the former, when it occurs even secondarily as its effect. I have seen a considerable number of such cases, which I cannot relate with preci-

precision, because I had not sufficient opportunities of observing the patients, to enable me to note the progress of the disease with accuracy.

Of these I can only observe, in general terms, that I have seen several instances of pain, imbecility, and wasting of the muscles in one of the lower extremities, which were considered as the effect of disease about the hip joint; yet the event proved that there was no organic affection of that part. The complaint was connected with that state of constitution which I have described, and was amended as the health in general improved. I have also seen several instances of wasting of the muscles of one of the upper extremities in children; so much indeed were the muscles shrunk, that the bones and joints could be as distinctly examined as in a ſkeleton. The local affection in these cases came on suddenly. I lately saw a little boy, who had an attack of this kind in his left arm several years ago, and on whose case I was at that time consulted. The bowels had been violently disordered previous to the paralytic

 affection,

affection, and were, at the time I saw him, in an extremely unhealthy state. I recommended that the chief attention should be paid to correct the disorder of these organs, and that the arm should be supported by a sling. The limb gradually recovered, and though it is not at present quite so large and strong as the other, yet the difference is so slight, that it would not attract the attention of a common observer. About six months ago I saw a little boy in very similar circumstances, and in his case, the arm quickly recovered its powers of motion, as the state of the digestive organs became healthy.

I have also seen cases in children, in whom, after some general disorder of the health, accompanied by derangement of the stomach and bowels, an affection of the muscles of the extremities has taken place, like that which produces the varus and valgus; I mean a predominance of the actions of some muscles over others, producing distortion of the limb. I have seen this happen sometimes in one, sometimes in both the

lower extremities. I have also seen the arm similarly affected.

That the local symptoms in these cases, as well as in those which have been more fully detailed, arise from a nervous affection of the brain, and not from any cause acting locally on the nerves of the affected part, will I believe, on due consideration be granted. I suspect however that some persons may hesitate to admit such an opinion, from the belief that disorder of the brain must operate generally, and not partially, on the nervous system. Perhaps the contemplation of the consequences of slight apoplectic effusions in the brain, may assist us in forming just notions on this subject. Such slight effusions of blood, occurring in various parts of the brain, have been known to paralyse one leg or one arm, or the muscles of the tongue, or of one half of the face, without affecting the rest of the nervous or muscular system.

Another opinion which I wish to be considered is, whether, when there is considerable and continued paralysis, there must necessarily

cessarily exist some pressure or organic disease in the brain. That this exists in many instances is undoubted; but the number of cases in which the paralytic affection is merely nervous, and independant of visible disease, is in my opinion very considerable. The instances which have been related warrant this conclusion, and shew such cases to be more frequent than is generally supposed. When there is organic disease of the brain, the case is very hopeless; and probably no considerable alleviation of the symptoms will take place, by that attention to the state of the digestive organs which I have recommended. In dubious cases, and such, on the first examination of them, the majority of these instances will probably be, it seems right to try the effect of correcting disorder of the digestive organs, with a view to alleviate nervous irritation, before we proceed to those severer methods, which the belief of the existence of organic or vascular disease in the brain would induce us to institute. For if blood-letting and counter irritation be employed, in order to diminish vascular action; or if mercury be employed to some extent

extent in order to induce the absorption of deposited substance; these measures must aggravate that disorder of the general health, upon which, in many instances, the nervous affection depends.

My object, in the recital of the foregoing cases, is to point out a cause of paralysis in particular muscles, which from its locality would, I suspect, be generally attributed to some local disorder of the nerves of the affected part, and therefore be treated erroneously. If my opinion of the nature of these cases be correct, they can only be successfully treated by means which operate upon the constitution in general. I have particularly recommended that our efforts should be directed to correct any errors that may exist in the functions of the primæ viæ, for reasons that have been stated in the preliminary observations. Of the efficacy of such endeavours I have seen many more instances than I have brought forward; indeed the propriety of such attempts seems so obvious, that I doubt not but they will be made, and the effect of them will, by that means, be generally demonstrated.

strated. It is right however to mention, that in some cases to which I have attended, I have been foiled in my endeavours to correct, by the simple measures which I have related in the introductory remarks, the disorders of the digestive organs; probably because their derangement depended on some established disease in the brain.

In other cases, when the functions of the digestive organs had been partially restored, the nervous and muscular affections were mitigated but not cured. I have also met with one instance, in which the bowels became moderately correct in their functions, without any evident amendment in the state of the limbs; and I have known two instances of persons, who were suddenly seized with paralysis of the lower extremities, apparently dependent on general nervous disorder, in which the digestive organs scarcely seemed affected.

In several of the cases which I have related, there were nervous pains in the affected limbs. That this symptom may arise from general nervous

nervous disorder seems to me very probable; at leaſt, I can affirm, that I have known such pains cured by correcting the state of the digestive organs. In the cases of tic douloureux, which have fallen under my observation, these parts have been greatly deranged; and I have cured patients of such complaints, by correcting this disturbance.

I wish finally to excite the attention of Surgeons to the state of the bowels in tetanus. The occurrence of this disorder occasionally, when the wound which produced it is healing, seems to indicate that the effects, which have been produced by its irritation, continue. It has been, I think, fully shewn, that local irritation may disorder the digestive organs; which disorder continuing, and aggravating the affection of sensorium, may possibly lead to the production of tetanus, at a time when the wound is no longer irritable. In four cases of tetanus, in which I had an opportunity of inquiring into the state of the bowels, the evacuations from them were not like fæces. I wish to propose, in investigating the cause of tetanus, as a ques-

 tion,

tion, What is the state of the bowels between the infliction of the injury and the occurrence of that dreadful malady * ?

* Such cases as I have related, with others that it would be foreign to my present purpose to mention, have impressed the opinion on my mind, that disorders of the digestive organs may originally cause, or may secondarily aggravate, a nervous disorder; and produce, as has been "mentioned, in the nervous system, a diminution of the functions of the brain; or a state of excitation causing delirium, partial nervous inactivity, and insensibility; or the opposite state of irritation and pain: in the muscular system, weakness, tremors, and palsy; or the contrary affections of spasms and convulsions." Could these circumstances be proved, it would be scarcely necessary to add, that those painful affections of parts, to which perhaps some pre-disposition exists, may be excited in a similar manner: such as gout and rheumatism. Indeed rheumatic pains are very usually concomitant upon that state of constitution, which existed in the patients, whose cases I am relating.

CASES.

SECTION II.

On the Effects of Disorders of the digestive Organs attending Injuries of the Head.

I SHALL next speak of those cases, in which local disorders of the head, produced by blows, are kept up and aggravated by affections of the digestive organs. After what has been observed respecting the reciprocal influence of the diseases of the brain, and of the chylopoietic viscera, it will readily be admitted, that an injury of the former may disturb the functions of the latter. Thus, concussion of the brain occasions vomiting as one of its immediate consequences, and will also be found to produce almost constantly, at a more remote period, that disturbance of the digestive organs, which I have described in this paper. If the disturbance be only moderate in degree, but continued, it will often re-act upon the head, so as to occasion

an irritable state of the injured parts, and impede their recovery.

In many cases of blows upon the head, a slow inflammatory affection continues in the parts chiefly injured, and ultimately produces destructive diseases. The bone sometimes becomes diseased, or an exostosis grows from its internal table; the dura mater becomes thickened, or matter slowly collects on its surface. Such local disorders produce others of a more general nature, and destroy the patient. These occurrences are however, in my opinion, rare in comparison with the cases first described; in which a painful state of the injured parts is kept up by means of disorder existing in the digestive organs. The necessity for an accurate discrimination between these disorders, must strike us on the most superficial view of the subject: for the lowering treatment, which is necessary in the first and rarer case, would be detrimental in the second and more frequent ones. By attending to the state of the digestive organs in these dubious cases, we may be enabled to form a probable opinion of the nature of the local

local complaint; for, if there be nothing wrong in the general health to excite or maintain it, we may reasonably conclude that it was merely local; on the other hand, the inefficacy of evacuations in curing the local disease would naturally suggest the opinion, that it proceeds from irritation, and is dependent on a disorder of the health in general. It should be further observed, that when the local disease is of an inflammatory nature, and likely to induce morbid alterations in the structure of the affected parts, still it may be maintained and aggravated by disorder of the digestive organs. I have very frequently seen patients suffer so severely as to warrant a suspicion, that local disease of the most formidable nature existed; in these the usual methods of treatment were ineffectual; and they recovered suddenly or slowly, in proportion as the state of the digestive organs was corrected. I shall relate some examples of the disease under consideration, which will enable the reader to identify the case, when it occurs in practice.

CASE VIII.

A young gentleman, about ten years of age, fell out of a window, six feet high, and struck the back part of his head against some stones. He was stunned by the blow, but perfectly recovered from the effects of the accident by bleeding, purging, and a low diet. He caught the scarlet-fever about six weeks afterwards, and recovered from that also. But, whilst he was convalescent, the pains returned in that part of the head which had been struck, with so much violence, as to induce the belief that some serious local mischief would ensue. After they had continued without abatement for a few days, I was desired to see him. He was lying in bed, and could scarcely be prevailed on to lift his head from the pillow. The integuments of the occiput were so tender, that he would hardly allow me to examine the part; I ascertained, however, that there was no fluid under the scalp, nor any inequality in the bone. He dozed a good deal, and lay in a comatose state, but was occasionally restless.

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His pulse was very frequent, his skin hot and dry, and his tongue covered with a thick yellow fur. He breathed almost without moving the diaphragm, and complained much if the epigastric region was compressed. He loathed food; his bowels were costive, and his stools of a blackish colour. He was ordered to take small doses of calomel at night, and draughts with rhubarb and kali vitriolatum in the morning. The tongue soon became clean, and the stools natural; his appetite and spirits returned, and he no longer complained of any uneasiness in the head.

This case presents us with a striking example of what I believe to be a common occurrence; I mean, a disordered state of the digestive organs taking place subsequently to a considerable febrile affection. Indeed, when we reflect in how weak and irritable a state the brain must be left upon the subsidence of such a disorder, and how much the chylopoietic viscera must suffer from the impaired and disordered energy of the brain, we might naturally expect such a derangement of the functions of the digestive organs to ensue.

ensue. When such disorder happens in this manner, it frequently produces many local diseases, to which the constitution may perhaps be predisposed; a circumstance I shall speak of in a future part of this paper. In the precent case, it brought on a painful state of parts recently injured, with a considerable degree of fever. That the morbid state of the stomach and bowels was the cause of both, is fairly to be interred from their ceasing so immediately, when the disorder of the digestive organs was corrected. A case of this kind, presenting an example of sudden recovery, is particularly valuable, because it clearly demonstrates the cause and the effect in such diseases. The cause can indeed be seldom so suddenly removed; and the gradual cessation of it under any plan of treatment leaves room for a variety of conjectures, as to the mode of cure or of recovery from those disorders which I have considered as effects. I could relate many cases of similar but less severe symptoms produced by the same cause, which gradually got well, in proportion as the disorders of the digestive organs were corrected. As it does not, however, appear to me necessary

sary to accumulate instances to prove so obvious a fact, I shall content myself with adducing two more cases, to exhibit such effects in different points of view.

CASE IX.

A lady fell down in frosty weather, in consequence of her feet slipping from under her, and the occiput struck against a smooth stone pavement. She was stunned by the fall, but soon recovered; nor had she for some weeks the severe symptoms, which appeared in the sequel. This circumstance shews that there was nothing produced by the blow that necessarily caused the subsequent symptoms; which must therefore be attributed to inflammation or irritation taking place afterwards. When some weeks had elapsed from the time of the accident, the parts which had been struck became extremely painful; and the pain extended forwards over the scalp to the right eye, the sight of which became imperfect. The integuments upon which the blow had been received were extremely tender, and the patient became faint when they were examined even slightly. These circumstances

cumstances naturally induced a belief that some disease was taking place; and bleeding and purging were employed to prevent its progress. The symptoms were mitigated for a time by these means, but they quickly returned with as much severity as before. After three months the patient came to London, fully persuaded that nothing but an operation would be of permanent benefit. When I first saw her, she tottered in moving from one chair to another, and replied to questions with hesitation and effort. Her eyesight was so much affected, that she could not read; and she entertained an apprehension that she should lose her senses. Her tongue was but slightly furred; her bowels were habitually costive, and the stools dark coloured. It was evident where the injury had been received; for the aponeurosis had been separated from the pericranium by an effusion of blood; and, though this blood had been absorbed, the detachment of the scalp was distinguishable by the touch. No inequality was perceptible in the surface of the bone. When I mentioned my suspicion that these symptoms were rather the effect of

of irritability of constitution; dependent on the state of the stomach and bowels, than of local mischief, she gave not the least credit to the opinion; but said she was persuaded that the bone was starred, and that three fissures extended in different directions. I ordered her to take five grains of the pilul. hydrarg. every second night, and a draught twice a day, containing one ounce of the compound infusion of gentian, two drams of the infusion of senna, and one dram of the compound tincture of cardamoms. These medicines produced a considerable purgative effect. On the second day there was but little pain in the head; the patient walked about the room very steadily, and had read a newspaper in the morning. When I asked her opinion of this surprising alteration, she imputed it to the evacuations which had taken place; but she was still persuaded that the bone was injured, and still apprehensive that, without some operation, she should ultimately lose her senses. The medicines were continued in such quantity as to procure only one alvine evacuation daily. A fortnight elapsed under this plan of treatment, during which

which the stools became nearly of a natural colour, and the patient's health was considerably amended. There were times when no uneasiness was felt in the head; and, during some nights, the pain was so trivial as to give but little interruption to her sleep. It was, however, occasionally disturbed by pains, which were, in her opinion, as intense as at any former period of the complaint. Her pulse was good, and her muscular strength greatly improved. The occurrence of the pain in paroxysms strongly impressed me with the belief that it was nervous, rather than depending upon local disease. Under these circumstances all ideas of an operation were dismissed from my mind, but it was far otherwise with respect to the patient. Being obliged to return into the country, she considered the possibility of a relapse with horror; and was so convinced that the bone had been injured, that she earnestly requested it might be examined, were it merely to ascertain what was the fact. I saw no objection to this examination, but thought, on the contrary, that advantage might possibly arise from an incision, which would loosen the tension of the scalp,

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and produce a discharge that might relieve the irritation of the part. I accordingly made an incision of a semicircular form; extending farther back than the part which had been struck, and turned up a portion of the scalp, so as to see the bone, covered by its pericranium, to the extent of a crown piece. The bone was uninjured, and, together with the pericranium, appeared perfectly natural. The scalp being replaced, the wound was dressed superficially, without any attempt to favour the union of the parts. If they united under these circumstances, there would be an additional reason for believing, that neither the bone nor the subjacent parts were diseased. The pain was as severe for the two first days and nights after this examination as it had been at any former period; it abated when the wound began to discharge, and had entirely ceased on the fifth day. This state of tranquillity continued as long as the patient remained in town, which was about three weeks after the division of the scalp. The wound at that time had nearly healed. She has since had occasional returns of pain in the head when her general health has been disor-

dered,

dered, but never to that degree as to induce a suspicion that any local vascular disease existed.

To exhibit the effects of the re-action of disorders of the digestive organs upon those of the head in another point of view, I subjoin the following case.

CASE X.

May 29, 1805, a labouring man, aged forty-five, fell from a considerable height upon his head, and was immediately brought to St. Bartholomew's Hospital. No fracture of the skull could be discerned: and the patient seemed to labour under the effects of violent concussion of the brain. By venesection, and other antiphlogistic means, he soon recovered his senses. Every thing went on very favourably for three days, when he was attacked with shivering, nausea, pain in the head, impatience of light, and other symptoms, which usually are considered as denoting inflammation of the membranes of the brain. He was consequently bled; and had a blister applied on the head. He was suddenly

denly seized in the evening with a more excruciating pain in the head, which, after lasting half an hour, was succeeded by convulsions, so violent that three men could scarcely hold him. When the fit abated, he expressed himself much relieved, and said that he was easier than before its accession. Some calomel and rhubarb were given to obviate a costive state of his bowels. On the next morning (June 2d) he had a return of the pain and convulsions; and the symptoms were so violent, that he was bled four times in the course of the day. This treatment, however, had no effect in diminishing the pain and other symptoms, and another fit of convulsions took place in the evening. The purgative operated on the succeeding night, and brought away a large quantity of highly offensive feculent matter of a light greenish-yellow colour. On the 3d of June his breath was extremely offensive; his skin hot and dry; his pulse quick; his tongue thickly furred; and he had great tenderness in the epigastric region, and right hypochondrium. He was ordered to take two grains of calomel immediately,

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and a saline medicine at intervals; this produced two motions in the course of the day. By pursuing this plan for a few days, the state of the bowels were rendered more regular, and the discharges acquired a healthy colour; in proportion as this was effected, the tenderness of the abdomen was removed, and the tongue became clean. He had no return of convulsions, the pain and other symptoms subsided, and in a short time, when the digestive organs had been restored to a natural state, he went out of the hospital perfectly well.

Cases of this description have been noted from the earliest ages. Many passages in the works of Galen shew that he was well acquainted with the circumstances that have been stated in this section. Bertrandi* has related instances of abscesses taking place in the liver consequent to injuries of the head. Andouillé† relates additional cases, and makes further observations on the same subject.

* Mémoires de l'Académie de Chirurgie, tom. iii. p. 484.
† Ibid. p. 506.

subject. Of late, Richter * has delivered similar opinions, and has directed the practice which should be pursued, when the head is disordered by the re-action of affections of the digestive organs. Still however these circumstances seem to me to be stated rather as occasional, than as occurrences which are common and naturally to be expected; and I therefore think myself warranted in supposing, that they have not made a sufficient impression on the minds of surgeons, in this country at least †.

I beg leave, in the conclusion of this section, to repeat what was said in the former one, viz. that I consider the disease as depending on nervous irritation in the parts affected, which is either caused, maintained, or aggravated by disorders of the digestive organs. Yet as the local disease must be regarded as chiefly nervous, it might, in some rare instances, exist independently of any manifest disorder of those organs. I may further

* Chirurg. Biblioth. b. viii. p. 538.

† In Doctor Cheston's Pathological Observations, however, cases of this description are noticed.

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add, that much nervous irritation in any part generally excites vascular action. It becomes therefore highly important to attend to the nature and cure of such disorder, as it might ultimately lead to the production of organic disease, which would destroy the patient.

CASES.

SECTION III.

On undefined and undenominated Diseases arising from Disorder of the Constitution.

THE next class of cases, to which I shall call the reader's attention, is that of unhealthy indurations, abscesses, and sores. Sometimes but one local disease of this description exists, but in general they break out in succession in different parts of the body. The circumstance of their successive formation is, I think, a proof that they depend upon some error in the health in general; and I have accordingly observed that they are seldom, if ever, unattended with disorder of the digestive organs. The imperfect history, which the patients generally give of their previous state of health, will not enable us to determine with certainty, that the disorder of the bowels was the cause of their ill health and subsequent local diseases; but I can confidently affirm, that those diseases in general

become tractable, in proportion as the disorder of the viscera is corrected; and that frequently no new local symptoms occur, after some attention has been paid to the state of the digestive organs. The diseases, to which I allude, have not been described in books of surgery; and indeed it is scarcely possible to delineate with precision their various appearances. It would be quite impracticable to describe all the diseases, which make the subject of the present section; namely, unhealthy indurations, abscesses, and sores. They may be compared, not improperly, in variety and number, with the infinitely diversified combinations and shades of colour. Yet a brief and general description of them will assist to recall them to the remembrance of the experienced surgeon; and to enable the inexperienced practitioner to recognize them, when they occur.

Some of these affections are quite superficial, occupying merely the skin. The first that I shall describe is, I believe, well known to surgeons, as a disease, which is frequently, though not constantly, cured by giving mercury

cury to such an extent as slightly to affect the constitution. A small induration or tubercle takes place in the skin, and this is followed by the successive formation of others at small distances from the original one. The skin between these tubercles becomes thickened. Chord-like substances, which are probably indurated absorbents, may sometimes be felt, extended along the thickened skin. The tubercles ulcerate, and form foul ulcers, which heal slowly and break out again.

Another species of superficial or cutaneous ulcer begins generally in one point, and extends in every direction. The chasm of the ulcer is formed either by a very sudden ulceration, or by sloughing. A sore is left, which first secretes a sanious, and then an ichorous fluid. Granulations afterwards arise, and the sore heals. The granulations are however indurated and unsound; and when the patient supposes that the sore is cured, it is suddenly reproduced by a process similar to that by which it was originally occasioned. After some time the ulcer again heals, and again breaks out. Whilst these processes are going

 on

on in the middle, the sore enlarges in its circumference; the edges, which are thickened, become at times highly inflamed, and either ulcerate or slough. The disposition to disease is aggravated by fits, and there are intervals when it is apparently tranquil. When this sore has enlarged to a considerable extent, in the manner already described, the central parts, which have healed unsoundly, break out into separate ulcers; and thus present an appearance of several sores, connected with each other by indurated skin or newly-formed substance.

I shall briefly mention some of the principal circumstances relating to the last sore of this description, which came under my care. The patient, who had been ill for more than two years, and had taken a great deal of mercury, came from the country in very bad health, and with his digestive organs much disordered. The sore was so painful, particularly at night, that he was in the habit of taking large doses of opium to procure rest. It occupied the back of the hand and wrist. He had had somewhat similar sores on his

 head

head and face; but they were nearly healed, though disposed to ulcerate again. By that attention to the state of the bowels which I have described, and by dressing the sore with an aqueous solution of opium, the greater part of it was healed in the space of three weeks; and the remainder was so much amended, and so little painful, that he had left off his opium shortly after the commencement of this treatment. As the patient's circumstances made it inconvenient to him to remain in town, he went into the country, where the sore broke out again. He then applied to a person who sold a famous diet-drink; and before he had taken twelve bottles, the sore was perfectly healed, and has not since broke out. The diet-drink, he says, had no sensible operation; but his bowels became regular and comfortable, and his appetite amended by taking it.

Another variety of these sores originates in a more deeply seated disease. The cellular substance under the skin becomes thickened, and an unhealthy abscess follows; after the bursting of which, a foul sore is formed. In con-

consequence of this process, the fascia of the limb is sometimes exposed to view, and seems to have sloughed: when the slough has separated, the disease may get well slowly. In many cases, however, there is no exposure, nor separation of the fascia. Sometimes the sore does not extend beyond the limits of the original induration, but heals slowly; while other diseases of the same kind occur in succession in various parts of the body. In other cases, the ulceration of the original sore spreads along the contiguous parts, whilst those which were first affected get well; and thus the sore assumes an herpetic character. In many cases the ulceration extends from the whole circumference of the sore, and thus the scar and ulcerated edges have a circular or oval form; in others, the disease is propagated in particular directions, so that the ulcerated surface presents the most irregular and singular figures.

These diseases sometimes are small in extent in the beginning, but enlarge considerably before the ſkin gives way; and, when this happens, it proves a kind of crisis to the dis-

disease, which afterwards heals slowly. In these cases it becomes the object of surgery to bring the disease to a crisis, whilst it is yet of small extent; which may be effected by producing ulceration of the skin by means of caustic.

Some of these sores are formed from diseases beginning in the absorbent glands; in which case the gland, having first been indurated, suppurates and bursts, and ulceration ensues. When this circumstance has taken place, in an absorbent gland of the neck for instance, another ulcer may form, in the manner above stated, in the skin and subjacent parts, without any gland being involved in it. A third ulcer, having a diseased gland for its cause, may form in the vicinity; and thus the disease proceeds without any regularity.

I once thought it a necessary but most difficult task for a surgeon to remark the varieties of these diseases, in order to understand his profession, and contribute to its improvement. But, since I have found that these diseases indicate some disorder of the health in

in general, the correction of which is the great object in their cure and prevention, I have perceived that there is less necessity for undertaking this most arduous investigation; which, indeed, could never be accomplished without very extensive opportunities and indefatigable diligence.

It will be found in the majority of these peculiar diseases, that the patient had been indisposed for some time before the occurrence of the complaint, and, that afterwards the health had become more evidently deranged. The digestive organs are disordered. The tongue is furred at the back part, chiefly in the morning; and the biliary secretion is deficient or depraved. My attention has been directed to the correction of this disorder; and the most beneficial effects have resulted from this attention. The sores have healed readily in some instances; and, in those cases where many had previously formed in succession, no new disease has in general taken place. In some few instances, new sores have formed after the medical treatment of the disorder had commenced, and even after it had been

for

for some time continued. This probably arises from the difficulty which is experienced in correcting an habitual and long-continued constitutional disorder. In some still rarer cases I have found similar but much milder diseases arise, after the disorder of the digestive organs had been in a great degree corrected.

Whilst I am writing this, there are *four* patients, whom I have attended in St. Bartholomew's hospital, with these diseases; which I mention, to shew the younger part of the profession how frequent they are. The health of these patients has been surprisingly amended in a very short period, by employing the means which I have described; and the sores have healed rapidly, although nothing but simple dressings have been applied to them.

It is not meant by these observations to depreciate the utility of topical applications to unhealthy ulcers, but merely to shew how much they depend on the state of the health in general; for some of them, which have remained uncorrected by a great variety of local

local applications, will get well under simple dressings, when the state of the constitution is amended. It is not, however, to be expected that this will generally happen; for local diseased action having been excited, becomes established, and may continue, independently of the cause which produced them. Topical remedies will, under these circumstances, be employed with the greatest advantage. Again, topical applications are of the highest utility in general practice, because an irritable sore affects the whole constitution, and aggravates and maintains that disorder by which it might have been originally caused. The disorder of the digestive organs cannot in many instances be corrected, till the fretful state of the local disease is diminished. I may further mention, with relation to this subject, that I have seen patients, who scarcely ever slept from the pain of the local disease, whose stomachs were greatly disordered, and who had a distressing purging, which could only be controlled by opium, sleep without interruption during the night, regain their appetite, and have their bowels become tranquil and regular, when, after various trials,

 a dress-

a dressing has at last been applied, which quieted the irritable state of the sore. It is right however to mention, that the effects of such an application are not, in general, permanent; but after a time the sore becomes again fretful, and requires some new dressing to soothe or control its irritability.

I have seen some cases of such diseased sores as I have described, in consultation with other surgeons, who have become convinced that my opinions are well founded. Others have occurred, even in the persons of medical men, whose feelings co-operated to render their conviction more strong.

Having thus, from general observation, acquired the opinion that the peculiarities of local disease depend chiefly on the state of the constitution, I shall relate some cases, which were treated in conformity with the principles which such an opinion would naturally suggest. I must, however, previously caution the reader against inferring, that I attribute all local diseases to some general

error

error in the state of the health. I have seen local diseases, which could not be deduced from any general indisposition, nor corrected by remedies which act simply on the constitution at large. I wish to guard against the suspicion of being inclined to make general assertions; while I avow at the same time, that my observations induce me to believe, that the peculiarities of local disease generally depend upon constitutional causes. Reason also suggests the same opinion; for if sores of the same character break out in succession in different parts of the body, can we doubt that they arise from the state of the health in general?

There appears to me a combination of nervous irritability and weakness, and to such a combination I am inclined to attribute the peculiarities of these variable and unclassed local diseases. Perhaps I may explain my meaning further, by adverting to what happens not unfrequently in cases of venereal and other buboes. The part and the constitution have been both weakened by the disease that has occurred; they have been further debilitated

debilitated by the mercury employed for its correction. The disease subsides, but a new disease and action commences; a trivial wound frets out into a phagedænic sore, which is very difficult of cure. The sores, in different cases, are nearly as various in appearance, as those of which I have been speaking. To what are we to attribute these dissimilar, perplexing, peculiar sores, if not to irritation occurring in weak and irritable parts? As the peculiar diseased actions of these sores originate chiefly from the weakness and irritability of the parts, induced by the previous disorder which they have undergone; so in their advanced stages they frequently present the best instance, that can perhaps be adduced, of a peculiar local disease existing independently of constitutional disorder. It is true they affect the health in general; but it may, by attention, be kept in a moderately right state, and yet the sore remains unamended. The diseased actions of these sores sometimes gradually, and sometimes suddenly cease; when healthy actions succeeding, the sore heals. I remember a sore of this description, to which almost every

variety of dressing had been tried without benefit. It was very extensive, and had burrowed in various directions beneath the skin. The ulceration at length became stationary; but after nine months the sore still remained as foul and fretful as it had been for a considerable time; when in the course of one week it perfectly cicatrized, leaving the hollows which I have described; for it had thrown out no granulations to fill these chasms.

Having thus stated the opinions which I have formed relative to these kinds of local diseases; and which have been deduced from cases too numerous to record, of which I have preserved no accurate accounts; I proceed to relate some cases treated in conformity to these opinions, which will, I trust, be sufficient to exemplify and illustrate the present subject.

CASE XI.

A gentleman's servant, between thirty and forty years of age, was sent to me with a bad ulcer in his cheek, situated between the nose and under eye-lid. The surrounding parts were inflamed, swoln, and indurated,

so

so as to rise fully half an inch above their natural level. The sore was of an oval figure; measuring about an inch and a half in length, and half an inch in breadth and depth; indeed I could scarcely see its bottom. The surface was covered by adhering matter of a greenish hue. The cuticle round the margin was thickened, and had in some parts scaled off. The patient had been rubbing in the mercurial ointment for this complaint. He declared that he had had no chancre for many years, but had contracted a gonorrhœa about a year before his present disorder. His health was much disturbed; he had no appetite; his tongue was much furred and tremulous; his bowels alternately costive and lax; his fæces blackish. I advised him to take five grains of rhubarb about an hour before dinner, and five grains of the pil. hydrarg. every second night, with castor oil or senna tea occasionally, so as to procure a motion daily. The sore was dressed with spermaceti cerate. I saw him again in three days; when he said that he felt himself under the greatest obligations to me. He had been entirely free from pain and dis-

 tressful

tressful sensations since he began to take the medicines; although he declared, that before that time, he should have been thankful to any one who would have destroyed him. I mention this, because I have often remarked in these cases, the surprisingly great relief and comfort which have arisen from a change, produced by means apparently insignificant and inadequate. The bowels now acted regularly, and the stools were more copious and of a more natural colour, and to this correction of the biliary secretion I am inclined to impute that relief which he so forcibly depicted. The sore had discharged profusely; the surrounding swelling and inflammation were much lessened. He pursued the same plan of treatment for a month; during which time he recovered his appetite; his tongue became clean; his bowels regular, and the biliary secretion natural. The sore had contracted into a small compass, but without the appearance of granulations; and the surrounding parts were not swoln, though still red. His health became at this time again much disordered, in consequence of his catching cold, from exposure to rain.

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He had pain in the bowels, with a slight purging; his appetite failed; his tongue was furred; and he had a severe cough, attended with copious expectoration. The sore on the cheek also enlarged to about one half of its former size: and the surrounding parts became tumid. I had the patient admitted into St. Bartholomew's Hospital, where he took the decoction of cascarilla with squills. His cough became materially better in a short time: the state of his stomach and bowels also greatly improved. The sore again diminished in size. About a fortnight after his admission into the hospital, an eruption came out over his whole body. The spots were of a copperish hue, but rather smaller, and more elevated, than venereal eruptions generally are *. Some of the eruptions gradually disappeared; and, in about a fortnight, it was certain that many were entirely gone. About this time he began to complain of his throat; and an ulcer, of the size of a shilling, formed in each tonsil. The edges of these sores were

* Many persons who saw the patient did not entertain a doubt but that all the symptoms arose from syphilis; it was their progress alone which evinced the contrary.

elevated and uneven, without any appearance of granulations; the surface was covered with yellow adhering matter. The patient now again caught cold: he was attacked with pain in the bowels and purging, which obliged him to get up frequently in the night, and to remain for some time out of bed. The cough and expectoration returned: he lost his appetite; and he had a furred tongue. Dr. Roberts, whom I met at the hospital, did me the favour to prescribe for him. In a day or two afterwards, an erysipelatous inflammation appeared on the right side of his face, opposite to the situation of the sore. The eye-lids were so tumid that he could not open them: the erysipelas spread to the other side of the face; and the other eye was equally closed. The fever also ran very high, and the patient became delirious; so that he was obliged, for many days, to be confined by a strait waistcoat. These symptoms gradually abated, and he recovered, so as to be in better health than I had ever seen him. He was discharged in about six weeks, in a state of convalescence; and attended Dr. Roberts as an out-patient. The eruption and sore throat had

had entirely disappeared; the original ulcer was firmly healed; and the contiguous skin had become soft and natural, though it was still discoloured. A year has since elapsed, and he has had no return of his complaints.

It is, I think, sufficiently evident, in the present instance, that the peculiarities of the local diseases had their origin in the state of the constitution.

CASE XII.

I was consulted, by a medical gentleman in my neighbourhood, on the case of a lady about forty years of age; who had been long subject to dyspepsia, and severe head-aches. Her present and chief complaint had been of about three months duration. It began with weakness, and an apparent irregularity in the motions of the lower extremities, attended with considerable pains resembling rheumatism, and rigidity of the calves of the legs. These symptoms increasing, she was unable, in the course of a month, to move about at

 all;

all; but was obliged to be lifted in and out of bed. At this time an induration of the muscles of the calf of each leg had taken place. The indurated substance was about three inches in length, and between two and three in breadth. It was severely painful at times, and the integuments covering it were occasionally inflamed. There was also some pain and swelling in the ham. Leeches, sedative lotions, and mercurial ointment had been applied; cicuta and tonics had been given, but without alleviating the symptoms. I first saw the patient about six weeks after she had been obliged to keep her bed entirely; and the peculiarities of the present case led me at once to refer its origin to the state of the health in general. The appetite and digestion were impaired, the tongue was much furred, and the fæces blackish. I merely recommended fomentations to the indurated parts, considering it the primary object to correct the morbid state of the digestive organs. With this view the compound infusion of gentian with the infusion of senna and tincture of cardamoms was given, in such doses as to procure an adequate evacuation daily,

daily, and five grains of the pil. hydrarg. were taken every second night. These simple medicines were completely successful: after taking them a short time, the discharges from the bowels were natural, and properly coloured with bile. The appetite returned; the tongue became clean, and the pains almost immediately ceased. No cutaneous inflammation, indicating a disposition to suppuration, appeared again over the indurated parts, which gradually recovered their natural state. In a fortnight the patient could go about with a stick, and in two months could walk as well as before her complaint. She has enjoyed better health, since this time, than for many years before *.

* The state of the indurated muscles, in this case, was such as would lead to the belief that suppuration would take place in different parts of the hardness; indeed, I have seen many cases less formidable in appearance terminate in that manner. Seeing how much the irritability of muscles is disordered by that state of constitution which I have been describing, I think it is allowable to conclude that most of the organic diseases of muscles originate from this cause.

CASE

CASE XIII.

A gentleman, thirty-two years of age, who had been subject for several years to occasional attacks of severe pain in the bowels, was seized, about the end of August, with a violent purging, which continued for a fortnight, and was attended with fever. About a month afterwards, he felt pain in his leg at night, which gradually became continued even during the day, and obliged him to confine himself to bed. In the beginning of October a swelling was perceived near the inner ankle, which suppurated, and was opened on the twentieth of the same month. Two large tea cups full of dark brown matter were evacuated. The discharge continued profuse for some time, and afterwards diminished. Four other small gatherings then took place in succession, and, bursting, continued to discharge; each aperture fretting out into a foul sore. About the beginning of February I first saw this case, which was considered as a disease of the bone. The five sores had apertures in them leading to sinuses,

which

which communicated with each other. A probe introduced into one of these, near the bottom of the tibia, could be moved upwards and downwards along the surface of the bone, which was not, however, denuded. From an upper ulcer the probe could be passed behind the bone, and under the muscles of the calf; this indeed seemed to be the original seat of the abscess, from which the sinuses proceeded to their different outlets. The integuments were œdematous, and firm to the touch; so that I could not distinctly feel the outline of the tibia; but I thought that the bone was not altered either in form or size. The firmness with which the patient stood upon the limb, and the want of aching pain in the bone, contributed also to make me believe that it was not diseased, and that the whole disorder consisted in an unhealthy abscess, the discharge from which issued from the various sinuses in the manner already described. I could not but attribute such a disease to a general disorder of the health, and indeed the patient's countenance and appearance indicated a constitution much weakened and harassed by illness. His tongue

was

was furred, and the discharges from the bowels were irregular, deficient in quantity, and of a blackish colour. With a view to the correction of these symptoms, I directed the patient to take five grains of the pil. hydrarg. every second night, and the infusion of gentian with senna, so as to procure one motion daily. But little benefit was obtained by these measures; and in about a fortnight afterwards a thickening of the integuments took place over the fibula; a considerable swelling gradually arose, and another abscess formed, which burst in about three weeks, and discharged a considerable quantity of brownish matter mixed with blood. During this time the limb was merely poulticed, and the patient could not leave his bed. His pain was extreme, and he had no rest at night. The use of opium was necessary to alleviate his sufferings, and opening medicines occasionally to procure stools. He took but little nourishment, and his health greatly declined. The disordered state of the stomach and bowels was much aggravated by this local irritation. Indeed, the situation of my patient was now particularly perplexing. The local

local disease made the general health worse; and the aggravation of this general disorder, which appeared to have been the cause of the local disease and of its continuance, proportionately increased the latter malady. The confinement to bed afforded an additional obstacle to recovery; yet it was impossible to remove him in his present state, on account of the pain which motion occasioned. The leg was insupportably painful in a dependent posture. As change of air and exercise seemed essential to his recovery, I was induced to try if Mr. Baynton's excellent bandage, by supporting the weakened vessels, would prevent their distention, and the consequent pain. The sores were dressed, after as much matter had been expressed from the sinuses as could be done without occasioning pain. Strips of sticking-plaister were applied after the manner of a many-tailed bandage; and the limb was afterwards rolled with a calico roller. The patient felt comfortable, and found his limb strengthened. He was directed to wet the roller, if the parts became heated. The effect of this treatment was surprising both to the patient

patient and myself. The pain, which had been constant before pressure had been employed, ceased from the time of dressing till five o'clock on the following morning; but from that time it gradually increased till noon, when the dressings were renewed. The cause of this occurrence now became manifest; for, upon opening the bandage, more than a tea-cup-full of matter was discharged from the different sinuses. I dressed the limb as before, cutting holes for the escape of the matter opposite to two of the chief sinuses. I desired the patient to put his leg to the ground, in order to ascertain the effect of the perpendicular position when the vessels were supported; and he experienced no inconvenience. The second day passed, as the former, without pain; and as the matter poured into the sinuses readily escaped, he had no uneasiness from its detention. I recommended him to sit up, and put his leg to the ground several times in the day, in order to accustom it to that position. After I had dressed it on the third morning, the patient stood up, and took two or three steps very feebly; but this was rather the effect of general weakness than

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of particular infirmity in the diseased limb. I now advised him to go a little way out of town in a carriage. The air and exercise, together with the freedom from pain, produced a very beneficial effect. He began to recover his appetite, to sleep at night, and acquired so much strength, that he was able in a week to go about his house, and to resume his attention to business. The discharge from the sinuses was very trifling, and the sores looked much better. The patient now undertook to dress his leg himself, and hired a lodging out of town, so that I only saw him occasionally. His limb was so much amended in the course of a fortnight, that it caused no more trouble than that of daily dressing. But his health was not good. His countenance had the same expression of illness as when I first saw him; his tongue was white and dry; his bowels costive; and the stools of an unhealthy colour. I therefore recommended him to take again the same medicines, which I had formerly ordered him. His health now improved; his tongue became moister, and less furred; the bowels more regular; and the fæces coloured with a more

healthy

healthy bile. He continued recovering till the middle of April, when he began to complain of the trouble of applying the sticking-plaister, and used the calico roller alone. I did not see him for three weeks, and then found him in a very desponding state. He complained of the tediousness of his confinement, which had lasted more than half a year, and said that he would willingly submit to have the sinuses laid open, if that would make him well. I found his leg well, excepting two orifices near the tibia; three ulcers which formed the apertures of as many sinuses, had healed; the outline of the bone could be distinctly felt; and there was no alteration of it in form or size. I was unable at first to account for this despondency under such favourable circumstances; but I soon discovered that it was the effect of hypochondriacism. For his tongue was much furred and dry; and at the same time that he left off the bandage, he had also discontinued his medicines. I urged him to return to them immediately; and called on him again in ten days, when he perceived clearly the absurdity of his late despondency, as well

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as its cause. He called on me on the 10th of July, with a new swelling near the upper part of the tibia, which threatened to form an abscess, similar to those which had formerly taken place. I covered the limb with the bandage of sticking-plaister, as at first. The new disease disappeared entirely; and the old ones were so much benefited by the exact and equal pressure, that the patient felt no difference between the sound and the affected limb. The ulcers gradually healed, and his health is better than it has been for some years: yet still there is an evident tendency to disorder of the digestive organs.

CASES.

SECTION V.

On more defined Diseases, as Carbuncle and Scrofula, arising from Disorder of the Constitution.

IF, upon an extensive and accurate examination of the subject, it were to appear, that many very peculiar and very dissimilar local diseases originate from a common cause, namely from weakness and irritability of the system in general, our enquiry would be further extended, and we should feel anxious to know whether similar causes may not operate in the production of more common and more frequent local disorders. As far as my late observations have enabled me to determine, that state of the digestive organs, which I consider as causing or denoting constitutional disorder, exists prior to the formation of a carbuncle; and is exacerbated during the progress of that disease. This opinion indeed

 will

will appear probable, if we consider the kind of persons who are attacked with carbuncles, and the considerable derangement of health, which even a trivial local disease of this nature occasions. I shall mention but one case in support of this opinion, though I have made similar remarks in several other instances.

CASE XIV.

I attended a gentleman, who was afflicted with carbuncles, during three successive attacks, at the interval of about a year between each. I made an incision through the indurated skin, down to the subjacent sloughy cellular substance, and thus brought the local disease to a crisis. This treatment was sufficient in the two first attacks; the extension of the disease was prevented; the sloughs separated, and the wound healed. The patient, whose mode of life was intemperate, had cough; difficult respiration; fullness and tenderness of the parts situated in the epigastric region; unhealthy secretion of bile; and in short, all those symptoms which denote a very considerable degree of disorder

 of

of the digestive organs: it is probable indeed that some organic disease of the chylopoietic viscera existed. After he had recovered from the carbuncle, I told him that the most important disease still existed; and urged him to be attentive to his diet, and to the directions of his medical attendants. He still however continued to live intemperately, and his disorder increased. He was indeed nearly dying from diseased viscera, when he was attacked with carbuncle for the third time. The division of the parts produced a temporary cessation of the disease; but it began again to spread in every direction from its circumference, and he died.

It will not, I believe, be doubted, that boils are a slighter degree, with some variation, of the same disease, which causes anthrax and carbuncle; and it is almost unnecessary to remark, that some persons are subject to a successive formation of very large and troublesome boils from the least irritation of the skin. I have seen many persons thus affected; and there has been, in every instance, disorder of the digestive organs, the

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correction of which has prevented the return of these vexatious local diseases. One gentleman, who had been tormented for many years by the quick successive formation of boils as large as eggs, has been free from them for some years; though he has had other disorders, which denote such a condition of the constitution, as it has been my object to describe in this paper.

I have remarked in many instances that diseases of the absorbent glands, such as are usually and justly denominated scrofula, occurring in adults, have apparently originated from the disorder which I have described. In several cases the local disease was of long duration, and had become worse rather than better under various plans of medical treatment; yet it amended regularly, and sometimes even quickly, in proportion as the state of the digestive organs was corrected. I need not detail any cases on this occasion, since every surgeon must know them familiarly. The patients are commonly sent to the sea-side, or into the country; where enlarged glands subside, and those which have

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suppurated and ulcerated heal; and the local disease recovers, in proportion as the health in general is amended.

There are cases of scrofulous diseases occurring suddenly, and in various parts of the body at the same time, which seem to originate in that state of the constitution which is occasioned by disorder of the digestive organs. I have chiefly observed these cases in children; and they have followed some violent febrile affection. In two cases which I shall particularly mention, the small-pox was the antecedent disease. I have already stated, that when the health has been considerably disordered by some violent disease, the digestive organs may become subsequently affected; and that this disorder proves a cause of many secondary diseases.

CASE XV.

A child of two years old had the small-pox, from which he did not seem to recover, but, on the contrary, fell into a very bad state of health. The absorbent glands on the right side

side of the neck became enlarged in succession, so as to form altogether a very considerable tumour, which extended down to the collar bone. The axillary glands then became affected in the same manner; the swelling was unusually great, and seemed to extend under the pectoral muscle, elevating it, and forming by this means a continuation of tumour with the glands of the neck. These swellings had partially suppurated, and had broken in two places, viz. in the neck, and about the margin of the pectoral muscle: but no relief followed; on the contrary, the mass of disease seemed to be rapidly increasing. The child was bowed forwards, so that the spine was much curved in the loins; the left leg appeared paralytic; and a swelling was perceived in the abdomen, which I could not but ascribe to an enlargement of the external iliac glands. The child was extremely emaciated; his skin felt hot and dry; his tongue was covered with a brown fur; and the stools were black and highly offensive. As there was no expectation that he could survive this desperate state, those medicines only were prescribed that seemed

 likely

likely to correct the state of the digestive organs: such as occasional doses of calomel and rhubarb. A strict attention to diet was also recommended. Under this treatment the stools gradually became natural, and the tongue clean. The disease seemed to stop immediately. As the health was restored, the swellings rapidly subsided; and the child became one of the healthiest and stoutest of the family.

CASE XVI.

A female child, after having had the small-pox, got into bad health from disorder of the digestive organs. She was then suddenly attacked with a scrofulous affection of the knee and elbow of the opposite sides of the body. Two collections of fluid had taken place beneath the fascia of the leg and thigh. The joints were greatly enlarged, and the swelling was apparently caused by an increase in the size of the bones. Had I seen either joint, as a single case of disease, I should have said that it would leave the child a cripple. It was manifest, in the present instance, that these local diseases were the consequence of general

general ill-health; and that the first object was to correct the disorder of the system. The functions of the digestive organs, which had been deranged, were restored to their natural state by employing the same diet and medicines which had been so signally successful in the preceding case. By these means the health was re-established, and the local diseases gradually disappeared.

I have heard it remarked by surgeons of great experience, that patients often recover when many scrofulous diseases appear at the same time; although some of them may be so considerable, that they would seem to warrant amputation had they appeared singly. The cases which I have related afford a most clear and satisfactory account of the mode of recovery. General irritation and weakness bring on diseases, to which perhaps a pre-disposition may exist, in several parts of the body; these cease when their exciting cause is removed.

Of late indeed I have been equally surprized and rejoiced to see swellings of the absor-

absorbent glands in children readily dispersed by that medical attention to correct errors in the functions of the digestive organs, which I have described. Some of these swellings came on rapidly, and some slowly, but these were so large and so much inflamed, that if any person had formerly told me they might be dispersed by such measures, I should have thought the assertion an absolute absurdity from its direct contradiction to my former experience. From amongst a considerable number of cases I shall relate the following.

CASE XVII.

The son of one of my friends had gradually fallen into a very bad state of health. The child was about six years of age, and had been unwell for several months; when, in conclusion, two glands in the neck became gradually enlarged, till each had attained the size of a large walnut. The child's tongue was much furred, his appetite very deficient, and capricious; his bowels had a costive tendency; his stools were never of a proper colour. His flesh was wasted and flabby, his counte-

countenance pale, his pulse feeble and frequent; and his general demeanor languid and irritable. I told his father, that I could advise nothing as a local application better than bread and water poultice; and that the chief object of attention was the correction of that disorder under which he had long laboured, so that his constitution might regain its natural tranquillity and strength. Upon this subject I promised to speak to the gentleman who had hitherto attended the child. In about two days a deep redness came over the most prominent part of each gland, denoting, as I concluded, a disposition in the internal parts to suppurate. The child took half a grain of calomel with five of rhubarb every second night, and ten drops of the acid: vitriol: dilut: three times a day. In about a week, an evident amendment was observed in the appetite, spirits, and colour of the excretions from the bowels. In a fortnight, the spirits of the child became, to use the words of the parents, ungovernable; and an evident amendment of the health in general took place. In a month, the child might be said to be well; though he still remained thin.

After

After another fortnight, he discontinued all medicine, except the occasional use of the powders, for at this time all vestiges of enlargement in the glands had disappeared. I do not relate this case as extraordinary, for I have seen several worse cases cured by the same means; and as I have said, some of the swellings have come on tardily and others rapidly. It is related merely, because in the same family another child had suppuration of the glands; which left a sore that healed slowly.

It cannot indeed be proved that these cases would have been strumous; it can only be said, that to all appearance they were the same as others which I have formerly seen suppurate, and form sores slow in healing, and such as are generally denominated scrofulous.

CASE XVIII.

A slender child about five years of age had five swollen glands on the right side of the neck, and three on the left. Their magnitude

tude was considerable, and the child's appearance sickly; and the disorder had so threatening an appearance, that the gentleman who attended the family requested the parents to take some additional opinion on the case. The tongue was furred, and the bowels so habitually costive, that sometimes a week elapsed without any alvine evacuation. As the child was feverish, he took at first some saline medicines in a state of effervescence, which was afterwards changed for the diluted vitriolic acid. He also took half a grain of calomel, every second night, which gradually brought about a regular secretion of healthy bile, and in about three weeks the child might be said to be well, for his bowels acted regularly when no medicine was taken, and the discharges from them were properly tinctured with bile. The use of calomel was now only recommended, if the appearance of the stools varied from the rhubarb colour. The swollen glands disappeared; nothing but a bread and water poultice having been applied to them. The bodily powers of the child were considerably augmented, and his aspect became healthy.

CASE

CASE XIX.

A boy between seven and eight years of age had a lameness about the hip, which was so considerable as greatly to alarm his parents. There was no tenderness when the joint was compressed either in front or from behind. The tongue was furred, and he had been subject to slight paroxysms of fever, resembling an intermittent. I recommended half a grain of calomel with a few grains of rhubarb every other night. In a short time the lameness so entirely disappeared, that I was no further consulted on his case. About eight months afterwards, however, I was desired to see him with three considerably enlarged absorbent glands on one side of his neck, and two on the other. They had for many days continued to increase. He was at that time feverish, and I now became more acquainted with the state of his health in general. I learned that he eat rather voraciously, and could not be restrained from taking very highly seasoned food; that though his bowels regularly enough

evacu-

evacuated the residue of the food, the stools were of various, and always of faulty colours, and very offensive; that he perspired profusely upon the slightest exertion. His skin was covered every where with scurf and eruptions, and his hands were hard, harsh, and chapped. He took the medicines, as in the preceding case, for about the same length of time, when the glandular complaint was well. He continued the half grain of calomel, however, for three months, for the secretion of bile had not even in that time become healthy in quantity and quality. His skin was, however, perfectly smooth and free from eruptions. His hands only retained in a slight degree their former feel.

I have also seen instances of sores apparently scrofulous left after the suppuration and ulceration of diseased glands, which had continued for more than a year, heal rapidly under the same kind of treatment. I have however seen other instances, in which the sores did not appear to be amended by such constitutional treatment.

I have

I have also observed several instances of strumous affections of the fingers in children get well in proportion as the general health has become established by correcting disorders of the digestive organs. I need not however detail them. These diseases were, in my opinion, strictly scrofulous. The nature of the disease in the following case will not I think be doubted, and on this account I relate it.

CASE XX.

A child about five years of age, after having had the measles, got into a bad state of health, and had several scrofulous abscesses form on the fore-arm. They became sores of various sizes, but in general about that of a shilling; the surrounding skin was thickened and of a purplish hue. The sores were foul and without granulations. In this state they were when I first saw the patient, and had continued with occasional amendment and deterioration for two years. Being consulted on the case, and perceiving the child appeared out of health, I examined his tongue, which was furred; enquired respecting his

 appetite,

appetite, which was deficient, and the state of his bowels, which were costive. The same medicines were prescribed as in the former cases. In about six weeks the child got into remarkably good health, which it had not enjoyed from the time of its first indisposition, and the sores rapidly and soundly healed.

My observations have led me to believe, that most local diseases are preceded by general indisposition, of which the disordered state of the digestive organs is an evidence, and may have been a cause. The relief arising from the correction of this disorder is indeed surprising, and the general knowledge of this fact I have deemed my duty to promote to the utmost of my power. When the appetite has been deficient, I have been accustomed to recommend acids as medicines, when on the contrary it has been good, and the digestion difficult and imperfect, I have recommended bitters and alkalies.

I mention this to account for my giving the vitriolic acid in these cases. It is in addition

dition to its medical properties, so pleasant, that even spoiled children will take it without agitating themselves, and distressing their parents. It pleases me to be able to give proofs of its utility; because, I think, they will be allowed to disprove that any specific good arises from the administration of alkalies. Alkalies may be useful occasionally in dyspeptic cases; but that they have no specific action in the cure of scrofula, I have long thought from some experiments which I made on this subject at the hospital. In cases of scrofulous glands, I gave soda in doses which were gradually increased till they affected the qualities of the urine, without perceiving any benefit to accrue to the local disease from their use. The pleasure which I feel in thus endeavouring to disprove the specific virtues of alkalies arises from this circumstance:—That if I am right in my notion, that they are chiefly useful by their operation in the stomach and bowels, it shews how much better it is to be informed of what ought to be done for the cure of diseases, than of the means by which it may occasionally be accomplished; or in other words, it shews

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how much superior the rational is to the empirical practice of medicine.

After having attempted to shew that many non-descript diseases arise apparently from the state of the constitution, and that carbuncle and scrofula are sometimes consequences of the same cause; it may be enquired, whether, if the same general disturbance of the health can produce so many varieties of local disease, it may produce many others, and even every variety. Even in cancer, disorder of the digestive organs appears to be antecedent to the local disease, and aggravated by its existence; but whether this disorder be the effect or cause of the constitutional diathesis cannot, I think, be at present determined.

CASES.

SECTION V.

On Diseases of various Glands, arising from Disorder of the Constitution.

I HAVE also observed that diseases of particular organs seem to originate, in many instances, from disorder of the system in general. The testis of the male subject, and breast of the female, have furnished me with examples of this observation. In the cases to which I allude, the testes were alternately affected, enlarging considerably, and then subsiding *. I have met with numerous and interesting cases of such diseases of the breast; however, the relation of a few will be sufficient to inform the reader of all that I know concerning this subject.

* The cause which excites and maintains alternate irritation and disease of the testes, generally resides in the urethra; but there was no disease of that part, in the cases which I now mention. The patients first became unhealthy, and disorder of the testes followed. Similar affections are not uncommon in pseudo-syphilis.

CASE

CASE XXI.

A lady came to London, to submit to the removal of a diseased breast, if it should be judged necessary. The disease had existed for more than two years. The breast of the affected side was one third larger than the other; indurated in several parts; and so much enlarged and hardened in one place, that this might have been taken for a distinct tumour on a hasty and inattentive examination*. This part was situated near the margin of the pectoral muscle. The disease had resisted the various means employed with a view to disperse it, such as leeches, lotions, mercurial ointment, &c. It was occasionally painful, and caused the patient so much mental anxiety, that the surgeon, who attended her in the country, thought it should be removed. The mammary gland of the op-

* It may not be improper to observe here, for the instruction of the younger part of the profession, that, if a breast containing a portion which is particularly indurated be examined with the points of the fingers placed circularly, the disease will feel like a separate tumour; but if the flat surface of the fingers be moved over it, its true nature will become manifest.

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posite side was far from being in a perfectly healthy state; which circumstance appeared to forbid an operation, since the same disease might take place afterwards in the opposite breast. The patient's general health was much impaired, her tongue was furred, her appetite deficient, her digestion imperfect; the biliary secretion was disordered, and the bowels costive. I ordered her to take a compound calomel pill every other night, five grains of rhubarb half an hour before dinner, and the infusion of gentian with senna, so as to procure a sufficient evacuation of the bowels daily. Linen moistened in water was applied to the part in the evening, or when it felt painful and heated. This plan of treatment reduced the bulk of the diseased gland by at least one third in the course of a fortnight. The patient went afterwards into the country, still employing the same medicines; and was entirely free from the disease in three months, though she felt occasionally shooting pains, which probably indicated that her health was not completely re-established.

CASE

CASE XXII.

A lady consulted me on account of a considerable swelling of the breast, attended with much pain. It had come on suddenly, and had been painful about a week; but she thought that a lump had existed previous to this time. The principal tumour was on the side next the sternum, and was as large as an hen's egg; it seemed to be distinct, yet there was a general swelling, with partial induration of the substance of the gland. The tongue was furred, the bowels costive, and the pulse frequent; and she was, to use her own expression, very nervous. I directed her to use the same means as were mentioned in the preceding case. Small doses of mercury act beneficially on the bowels, by inducing regular and healthy secretions; and I know no better method of administering it as a discutient. The general induration of the breast and tumefaction of the integuments subsided quickly under this treatment, and left the lump in the same state which I supposed it to have been in before the attack of general

 swelling

swelling and pain. In another week this apparently distinct tumour was flattened on its surface, diminished in size, and confused with the substance of the mammary gland. Its form varied each successive week; it first became oblong, and afterwards seemed to separate into two parts; but in less than six weeks no trace of it could be felt.

CASE XXIII.

A medical man, who resides in the country, brought his daughter to town for advice. She had apparently a tumour in her left breast, between the nipple and the axilla; in which part she had felt a good deal of pain. The swelling was of very considerable size, and the breast so tender, that I could not exactly make out whether it arose from distinct tumour, or from a partial enlargement of the mammary gland. Want of time prevented the patient's father from shewing the case to another surgeon. I could only give him this opinion; that in the present circumstances no one would think of an operation. I recommended the application of the lotio ammon. acetat. when the part felt heated; and as the patient had disorder of

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the stomach and bowels to a great degree, that the chief attention should be paid to the state of these organs. A grain of calomel was directed to be taken every second night; rhubarb before dinner, and infus. gentian and senna, if necessary.

About two months afterwards, having occasion to be in that part of the country where the patient resided, I called on her. Her father then told me that the swelling had subsided considerably, after his daughter's return into the country; and that of late he had not examined the complaint, as she told him she felt no uneasiness from it.

When I now examined the breast, I could not perceive any difference between it and the other. No vestige was left of a disorder, which had been of such a magnitude, as to occasion considerable alarm; a circumstance that excited the greatest surprize in the mind of her father, who was a practitioner of much experience*.

* I have also known cases of induration and suppuration of the salivary glands, apparently caused by the same general disorder, and cured by the same treatment.

Before

Before I had paid attention to those complaints which arise from, or are aggravated by constitutional causes, I could not have believed that such considerable local diseases, after resisting various topical and general means, should give way so readily and completely to small doses of medicine. It is only by considering the manner in which this effect is produced, that the subject can be placed in a proper point of view.

An attention to the state of the bowels is indispensably necessary, even in the common practice of surgery. A simple cut of the finger frets into a bad phagedænic sore, which resists every local remedy so long, that amputation is at last proposed. This is the consequence of bad health, which in its turn is aggravated by the irritation of the sore. The patient has a furred tongue, with other symptoms of disordered digestive organs. An attention to this disorder corrects the painful state of the sore, which now heals rapidly under simple dressings.

A patient has a disorder in the urethra,

 almost

almost too trivial for surgical attention; yet producing much inconvenience. The functions of the digestive organs are impaired, and he is hypochondriacal. He consults a physician, under whose care his general health is amended, and he no longer feels or thinks of the local disease.

An erysipelatous inflammation of the leg is imputed to some trivial cause; as for instance a gnat-bite. It becomes worse under the common remedies. The health has been long declining, and the chylopoietic viscera are obviously deranged. The erysipelas is quickly cured by medicines prescribed for that disorder.

A patient has a trivial sore on his leg which the surgeon finds a difficulty in curing by the usual methods. The patient feels indisposed, and has a manifest disorder of his digestive organs. The sore begins to slough, and becomes very painful. The disorder of the stomach and bowels is augmented; so great is the indigestion, that the small quantity of food which the patient thinks it necessary

necessary to swallow for sustenance, feels weighty and uncomfortable in the stomach; and the vegetable food becomes almost corrosively acid. Opium fails to procure sleep, or even to give ease. When the mortification has spread so as to occupy almost one fourth of the integuments of the leg, several very copious pultaceous stools of a greenish brown colour are discharged from the bowels in the course of the night, and the patient's feelings undergo an entire revolution. Before this, the stools procured by medicine were watery and dark coloured. The patient now sleeps like one long harassed by pain and watching; his stomach is tranquil and willingly receives aliment, which now produces no uneasy sensations. The skin which had been hot and dry, becomes moistened with a gentle perspiration, and the pulse beats with its natural frequency, and in a tranquil manner. The effects of this favourable crisis being maintained by medical treatment, the sloughs are thrown off and the sore heals with a rapidity indicative of considerable vigour of constitution, and further demonstrative of the sloughing not hav-

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ing been the effect of vascular weakness, but of nervous irritation. I could relate numerous cases of erysipelatous inflammation terminating in sloughing, in which the disease arose from a similar constitutional cause.

In order further to elucidate this subject, I subjoin the chief circumstances of a case which occurred since the publication of the second edition of this book.

A gentleman who once had a pimple on his leg spread by sloughing, so as to produce a considerable chasm both in circumference and depth, was much alarmed when another equally trivial complaint manifested the same disposition. He was at this time in London on a visit, and desired me to attend him. The patient was about 50 years of age, and a robust healthy looking man; his pulse was remarkably vigorous, and in all respects right; his tongue but slightly furred, and his bowels regular. To me his apprehensions seemed unfounded; he was however confined to a sofa, and a linseed poultice applied for nearly three weeks, without any augmen-

augmentation of the disease, or any separation in the circumference of the eschan. The slough had split into portions, and a fœtid matter oozed from it; at that time the poultice was changed to one made with stale beer, with a view to excite a little action in the indolent parts. It produced however irritation, and in one night the sloughing of the integuments increased to one third more than its former extent. The linseed poultice was again employed, and after some weeks were elapsed, as no separation had occurred in the circumference of the slough, and it appearing penetrable by medical applications, weak acids, infusions of bark, dilute spirits, and resinous tinctures were tried, to learn the effect upon the slough and contiguous parts; some of the slough had by this time separated, and new flesh of no unhealthy appearance presented itself beneath the sloughing part which extended no deeper than the skin. None of the applications seemed of any material benefit, and any thing of an irritating nature appeared to produce irritation, with a slight increase in the circumference of the slough. As the sloughing of the skin seemed to be the effect of disease extending

ing in it while the cuticle was entire, and when consequently no application could have any peculiar effect, but would act as a simple stimulus; and as all stimulants appeared injurious, I contented myself in future with the application of the linseed poultice and simple dressings. Under their use the sloughing of the skin continued to spread during a period of about six months, when the patient died. The disease began about the middle of the tibial side of the leg, and extended towards the front and outside till it occupied about three fourths of its circumference; it extended also towards the ankle, and to within about two inches of the upper end of the tibia. At one time it spread by a dusky-coloured inflammation, suddenly occupying a considerable extent of skin, yet in this district there were parts more discoloured, and presenting an appearance similar to that arising from the transudation of blood from the veins in dead bodies. The parts so discoloured first sloughed, leaving several insular portions of skin still preserving its vitality. Some of these portions slowly perished, others never completely mortified.

At other times the mortifications spread slowly, and merely from the circumference without any previous disease in the skin being apparent; every new extension was preceded by constitutional disturbance; and when the patient felt well and was tranquil, the disease continued stationary at times for a fortnight or three weeks. As the sloughs successively separated in the order in which they took place, a healthy granulated surface appeared beneath them, which cicatrized; and cicatrization also taking place from those portions of skin which did not completely perish, the sore healed with more than usual celerity, so that a short time before the patient's death there was much less slough and appearance of disease than at former periods. Having described the local treatment of this unfortunate case, I have only to relate the circumstances observed relative to the system at large, and the medical treatment which was instituted. The patient had been accustomed to eat a well cooked dinner and to drink a liberal quantity of wine afterwards. About four months preceding this attack, he had very much diminished his quantity

of

of wine; and from this time he thought that he became nervous and uncomfortable. His nervous feelings were manifested by anxious looks and inquiries, and by impatience to have things done at the moment and in the manner he wished; he was also apprehensive and solicitous about others in cases which warranted no such feelings. He was thirsty, and generally had a tumbler of water on the table, which he supped occasionally, though he did not indulge himself in drinking it. He eat his breakfast and dinner with appetite, and in moderate quantity. His bowels were regular; and the biliary discharges, although not right, were not materially otherwise. The first attentions were paid to the digestive organs, in the manner described in the introductory remarks; but when the mortification was extending, nitric acid and bark were exhibited. When the bark was increased to a moderately large dose, in order to ascertain whether it was likely to be of service to the local disease, it rendered the patient slightly feverish, increased his thirst, and caused the tongue to become dry and brown. These medicines were changed for cordials,

as camphor, julep, with aromatic confection, which seemed to answer better. Opium was tried, and seemed to be beneficial in moderate doses, administered at regular intervals; but in larger doses it seemed injurious. The patient throughout suffered very little pain, and slept well except at those times when a temporary disturbance of his health, that has been mentioned, occurred. At those times also the white part of the eye assumed a yellowish tint, and there was an expression of languor and disquiet in his countenance; as cordials agreed with him, a liberal quantity of wine was permitted; nevertheless he gradually became feebler and his flesh wasted, whilst his belly enlarged; of this enlargement he took notice himself, it first appeared to be merely tympanitic, but subsequently water was evidently effused. The right foot and ankle became considerably odematous; of the left or diseased limb they were but slightly so; he had but little pain, and talked of returning into the country; he was good-humoured and cheerful almost to the last. A short time before his death his memory failed, and he thought but little even on his

 own

own case. At last he was seized with profuse diarrhœa, consisting of watery discharges, and being exhausted, he slept during the last 24 hours of his life.

Now, that the sloughing was not in this case the effect of vascular debility, I infer not only from the state of the pulse, but from the rapid healing of the sore; that his nervous system was merely disordered and not diseased, was to me sufficiently evident. Although I was extremely desirous of examining the body I was not permitted to do so.

A patient supposes that his knee is strained; for pain and inflammation of the joint suddenly come on, with deposition of fluid into the articular cavity; this attack is attended with fever, furred tongue, and unnatural discharges from the bowels. Leeches, cooling washes, and poultices; in short, all topical applications are unavailing. It is a case of rheumatic inflammation, for which a physician is consulted. Five or six weeks elapse without any abatement of the disease, the

 patient

patient being almost unable to stir in bed. An alteration in the health suddenly takes place; the tongue becomes clean, the bowels regular, and biliary secretion healthy; and there is no longer any pain in the knee. All the fluid is absorbed from the joint in two days, and the patient walks about his chamber. Or there may actually have been some local injury; but the consequences are very considerable and violent, and quite incommensurate to the cause. Such occurrences can only be explained by imputing the effects to the state of the health in general *.

A case like that described in the preceding sketch would, I believe, be acknowledged by every one to be dependent on the state of the constitution in general; but I could bring forward a great number of instances of chronic affections of joints, incurable by local measures, which were evidently cured

* As operations are injuries, so we ought not to perform them, if it can be avoided, where the constitution is much disordered. I could relate several instances of the wounds made in operations, assuming diseased actions from such a state of the constitution.

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by correcting those errors in the state of the digestive organs, which were the cause or effect of general disorder of constitution. In diseases of joints, we find three distinct kinds of cases. First a scrofulous disease of the bones, which ultimately affects their articular surfaces; secondly, an inflammatory affection of the joint, producing effusion of fluids into its cavity, and ulceration of the cartilages and ligaments; and in this case, the most perfect rest, and most strenuous efforts by local means to put a stop to inflammation are requisite; and thirdly, an inflammation dependent on constitutional causes. This inflammation is sometimes of an active and painful nature, and sometimes of a more indolent and chronic character; but whatever form it may assume, it is less prone to injure the structure of the joint, and little susceptible of cure by local measures, whilst it yields to those means which tend to improve the health in general. When a diseased joint is so situated as to become an object of examination, these circumstances will be sufficiently evident. I am induced to mention them chiefly on account of such

variety of affections occurring equally in the hip, as well as in the other joints, in which case the benefit accruing from different modes of treatment is less demonstrable to the sight and touch *.

* As I know of no treatise on diseases of the hip in which this distinction of cases is made; and as, from what I have seen, I cannot but consider the subject to be very important; so I think I should do wrong to forego the present opportunity of relating as succinctly as possible two of a considerable number that have come under my observation, in order to excite attention to this subject.

CASE I.

A boy about twelve years old was sent from school to London, being supposed to have a lumbar abscess. There was a considerable collection of fluid beneath the fascia of the thigh; but it received no impulse when the patient coughed. The boy limped in walking as if he had a diseased hip, scarcely bearing on the affected joint. When pressure was made on the front of the orbicular ligament, it gave him acute and considerable pain. He was kept perfectly quiet in bed, blood was taken by leeches repeatedly from the integuments opposite to the inflamed joint, and linen wet with diluted aq: ammon: acet: constantly applied, till pressure no longer occasioned pain. A blister was then applied over the joint, and the cuticle being removed, the sore surface was dressed with savine cerate. This dressing produced considerable inflammation and ulceration beyond the blistered part, and caused the surface of the skin which had been deprived of its cuticle

cuticle to mortify. Near a month elapsed before the sore healed. At this time no fluid was discoverable beneath the fascia; no uneasiness was felt when the joint was compressed; and the boy could not be prevented from getting up, because he felt as competent to walk about, as before the occurrence of his disease. He went to school again in the country, and after two years was put into a merchant's employ; in which situation, he was obliged to be constantly walking about the town. He then again became lame in the same manner, but not to the same degree. There was, however, no effusion of fluid beneath the fascia of the thigh. A month's rest with similar treatment seemed to have cured this relapse; and I then told his father that he must change the employment of his son: observing, that though the joint might recover sufficiently to endure common exercise, without injury, it was not to be expected that it would ever be able to sustain violent exertions with impunity. I urged him, also, to let me know immediately if there was any return of lameness. About three months afterwards, I met the father and his son in the street, and observed that the youth limped in walking very much. I asked why I had not been informed immediately, as I had requested, of return of lameness; and further enquired, whether the boy still continued in the same situation. Being told that he did so, I felt so much hurt at the cruel and absurd conduct of his father, that I declared I would no longer interfere in their concerns, nor was I asked to do so.

All that I can further relate of this case is, that a large abscess formed and broke behind the trochanter, and that I once afterwards saw the poor lad lying in St. Bartholomew's hospital with his thigh bone dislocated in consequence of the destruction of the ligaments of the joint.

CASE II.

A young lady of a delicate and susceptible constitution, who had suffered much uneasiness of mind on account of some of her friends, became so excessively lame in the left hip that ſhe could not move a few steps without support. Pressure on the front of the joint occasioned considerable pain. Her tongue was much furred, and her bowels greatly disordered, and she had fits of agitated and difficult respiration. I recommended nothing but tepid fomentations to the hip, and explained to her physician what I thought would be right to be done with regard to the state of the digestive organs.

As she became better in health, her power of moving about increased, and she went to the sea-side. After two years there still remained some tenderness, when the hip joint was compressed and some thickening of the parts which covered it. She, however, eventually got well, though no local applications of any moment were made to the diseased parts. I need scarcely add, that the means employed in the first case, with such striking success, would have been prejudicial in the latter, whilst those which were serviceable in the last case, would have been futile and nugatory in the former.

CASES.

SECTION VI.

Disorders of Parts which have a Continuity of Surface with the alimentary Canal.

I HAD formerly observed spasmodic strictures of the œsophagus to disappear under various modes of treatment, in a manner which I did not understand. Mercury seemed to effect the cure in three instances. Many cases have occurred to me lately, in which the irritation in the œsophagus seemed to be first excited and afterwards maintained by disorder of the digestive organs. It will be readily allowed, that spasmodic strictures of the œsophagus, when long continued, may cause a thickening in the affected part of the tube, and thus the stricture may become permanent. One instance will be sufficient to illustrate and verify this view of the subject.

CASE

CASE XXIV.

A lady, who had been in bad health for many years, and was supposed by her medical attendants to have a stricture of the œsophagus, became at last incapable of swallowing any food, except in very small quantities; she was even then obliged to drink some fluid after each morsel, to facilitate its descent into the stomach. Some mucus and blood rose into the mouth after vomiting, which very generally followed the taking of food. Under these circumstances, I was requested to pass a bougie, in order to ascertain the state of the œsophagus; but I declined this examination, on account of the disorder which existed in the stomach. The tongue was greatly furred; the parts in the epigastric region very tender: the bowels much disordered; the secretion of bile either very unhealthy, or entirely wanting; every symptom, in short, which indicates an aggravated form of disorder of the digestive organs existed in a striking degree. The stomach and bowels were brought into a better state by such medical attentions as I have already so often described; and the œsophagus partook

took of this amendment: for moderately sized morsels of food could now be swallowed without the necessity of washing them down by liquids. The general health also improved, and she became fat. But the disorder of the digestive organs, which had been of long continuance, was not completely subdued; she was still subject to relapses, and in some of these the difficulty of deglutition again occurred.*

The throat and mouth are the parts next in order; but it is unnecessary to relate additional cases under this head: some of the instances already recorded will be sufficient to confirm my sentiments on this subject, and the propriety of the practice which I have recommended.

That diseases of the nose may be caused or aggravated by irritation arising from the stomach is a proposition, which will, I think, be readily granted. Indeed it seems surprizing that the operation of this cause has been

* This patient has now for more than four years been free from this disorder.

so

so little adverted to in books of surgery; since the phænomena which prove the fact are so well known. Are the monstrous noses, caused by excessive drinking of vinous and spirituous liquors, to be otherwise accounted for, than by irritation arising from the stomach? And do not worms in children cause a teazing sensation in the extremity of the nose? I had seen, in private practice, several cases of irritation and swelling of the end of the nose, in some instances accompanied with small ulcerations of the pituitary membrane. In these cases, the skin over the nose, which was tumid, became rough and discoloured: the middle of the discoloured part became sound; whilst the circumference retained its morbid actions, the disease there spread in a small degree. In these cases the tongue was furred; and there were evident indications of disorder in the stomach and bowels. The disease was checked, and cured, by attention to this disorder. I was strongly impressed with the opinion, that if these cases had been neglected, they would have terminated in that herpetic ulceration, which so often affects the end of the nose. I have also seen several instances

of that herpetic ulceration in its confirmed state more materially benefited by medical attention to correct the disorder of the digestive organs than by any local application: and I feel confident that it may be frequently cured by such endeavours.

I have observed, in all the cases of that noisome and intractable disease, ozæna, which have come under my care lately, that the stomach and bowels have been disordered; and more benefit has been obtained by endeavouring to bring these organs into a healthy state, than by all the local application, which had been previously tried. I stated to a medical friend my opinions respecting one patient, who came from the country, and begged to know the effect of the treatment which I had proposed. He informed me, after some months, that he had not been able to succeed in correcting the visceral disorder; and after relating the means which had been used, he adds, "The patient was now attacked with a bilious disorder, to which she had formerly been subject, and for which I gave her six grains of calomel in a bolus, which soon relieved

relieved her. During this attack the nose seemed well; there was no fetor in the discharge, and she recovered her sense of smelling." However the disease returned afterwards as before.

I have known several instances of persons who have for a long time been subject to polypi of the nose, in which the polypi ceased to grow after some attention had been paid to correct a disorder of the digestive organs.

In farther confirmation of the opinion, that diseases of the nose depend much upon the state of the stomach, I shall mention the case of a woman, who had a disease of the nose which I expected would, at least, prove very tedious and very troublesome, but which got well speedily under simple dressings, in consequence, as appeared, from the effect of internal medicines.

CASE XXV.

This patient was between thirty and forty years of age; had a furred tongue, bowels alternately costive and lax, and the discharges discoloured. An enlargement of the left ala

nasi,

nasi, caused by a great thickening of the parts covering and lining the cartilage, had gradually taken place. The skin was discoloured, and an ulcer, about the size of a sixpence, had formed on the under surface of the ala. The sore was deep, with a sloughing surface, and uneven and spreading edges. Spermaceti cerate was employed as a dressing; and the external skin was frequently bathed with Goulard's wash. She was ordered to take internally five grains of rhubarb an hour before dinner, five grains of the pil. hydrarg. every second night, and the infusion of gentian with senna occasionally. The sore ceased to spread, the swelling gradually subsided, and all diseased appearances were removed in the course of a month. The patient also found her health considerably amended.

In most cases of deafness, there is probably a state of irritation, and a tendency to inflammation, throughout the passages of the ear. The external meatus may be unusually sensible, the secretions being either suppressed, or discharged in an unnatural quantity. The lining of the eustachian trumpet is thickened; and

and hence it becomes partially obstructed. It must be admitted that such a state of the organ is likely to be aggravated by a cause, which maintains or produces irritation in the nose. When dullness of hearing also depends on a torpid state of the nerves, it may be caused by the same circumstance, which is known to affect the sensibility of other nerves.

Indeed, I have remarked that the hearing of many persons has considerably varied with the state of their health in general; so that I felt no surprise from the occurrence related in the following case.

A gentleman applied to me on account of some pseudosyphilitic symptoms, which I told him would gradually become well. I advised him, at the same time, to be particularly attentive to the state of the digestive organs, which were generally disordered by the effects of the poison. He took five grains of the pil. hydrarg. every second or third night. The disorders for which he had consulted me were all removed in the course of two months; when

when I received a letter from him, saying, that he thought it a duty he owed to me and to the public to inform me, that the lenient course of mercury, which I had recommended, had cured him of a considerable degree of habitual deafness.

It is well known that ophthalmy frequently arises from constitutional causes; and in such cases the digestive organs are generally deranged. The health will be most speedily restored, and the local disease most effectually diminished, by correcting the disordered state of the abdominal viscera. There is no necessity for enlarging upon this subject; yet it may be useful to state what I have observed respecting those ophthalmies, which take place subsequently to gonorrhœa, and which have generally been ascribed to a retropulsion of that disorder, or to the accidental application of the discharge to the surface of the eye. In the worst of the cases, which I have seen lately, there was considerable redness and irritability of the eye, lasting nearly a fortnight. The digestive organs were deranged in all the instances, to which I allude; and I attribute

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the comparative well-doing of these patients to the attention which was paid to their correction. In other cases, which I had formerly been witness to, where evacuations by bleeding and purging, &c. were employed, the disorder was extremely obstinate; nay several patients lost their sight.

The cases of ophthalmy connected with gonorrhœa appear to be of two kinds. In the worst case, and that which I have happened to meet with most rarely, there is, I think, reason to suppose that some of the discharge from the urethra has been accidentally applied to the surface of the eye. This circumstance may be inferred from the copious and puriform discharge which takes place from the conjunctiva, which is continued for about three weeks, and from the disease not yielding to any remedies which usually relieve other ophthalmies. The milder and, to me, more commonly occurring case, seems to be the result merely of irritability of constitution. With relation to this subject I may mention, that I know a patient who has several times had discharge from the

urethra

urethra and inflamed eyes alternating with each other; and both apparently arising from constitutional causes. I shall also add the following striking instance of ophthalmy connected with gonorrhœa, in which the inflammation of the eyes can neither be supposed to be the effect of local contamination nor of metastasis.

CASE XXVI.

A gentleman, having a gonorrhœa and being in a remote part of Scotland, felt himself obliged to go to the west of England with the greatest expedition. He came to London by the mail coach, and during the journey his eyes became greatly inflamed, and he was much tormented with dysury; he was indeed so ill, upon his arrival in town, as to be unable to proceed on his journey. His eyes were exceedingly red and painful, and the lids tumid. He had frequent and urgent desire to void his urine. The discharge from the urethra was very copious. His tongue was much furred; his bowels had a costive tendency; the stools were blackish and

and offensive; his pulse frequent, and neither full nor strong; his skin hot and rather dry. He said that formerly, having a gonorrhœa, he had been affected with ophthalmy in the same manner. He was directed frequently to bathe his eyes with lukewarm decoction of poppies; but the chief attention was paid to the state of his stomach and bowels. He took five grains of the pilul. hydrarg. every night, and other medicines to procure a sufficient alvine evacuation daily. On the third day he had severe rheumatic pains in his shoulder. On the fourth, his knee became affected with rheumatism, and so much swollen that he was incapable of moving about, though his eyes were much better, so that he was able to sit up and bear the window shutters of his chamber to be left open, which he could not before have permitted. On the fifth day, though better, his eyes were still much inflamed, his dysury troublesome, and he was unable to walk from the rheumatic affection of his knee. The discharges from the bowels had been regularly observed, and they still continued of a very wrong colour, till the evening of this day, when he had a

 stool

stool properly tinctured with healthy bile. He now felt a sudden and surprizing amendment, which appeared equally so to others on the following day; for I found him walking about with very little lameness, his eyes requiring no further attention than wearing a green shade, and he had no dysury. In two days he pursued his journey, nor did he experience any relapse.

There is a chronic ophthalmy, which is, I believe, generally considered to be venereal, probably from the difficulty of curing it, and probably from mercury being frequently beneficial to it. As cases of this description evince how much ophthalmies are likely to depend upon constitutional causes, I shall briefly relate the following to identify the kind of disease to which I allude.

CASE XXVII.

A gentleman had for more than two years been more or less subject to a chronic ophthalmy. When he was very bad, he had twice used mercury for its cure, and with temporary success. The last mercurial course

was a considerable one, as the relapse of his disorder was attributed to the insufficiency of the former one. The ophthalmy, however, returned with as much, if not with more severity than formerly. The eye was extremely red, very irritable, and his vision very imperfect. I found the patient shut up in a close and dark chamber, from which he rarely ventured to stir, lest he should catch cold. His tongue was furred, and his biliary secretion faulty. I directed small doses of mercury every second night, merely as pro-bilious medicines, and requested him to pay attention that his bowels were kept clear without being what is called purged. I also urged him to go out into the air and use active exercise. By pursuing these measures, the ophthalmy was nearly well in about three weeks. He now either caught cold or fancied that he had done so; his general health became disturbed, and his ophthalmy returned. It got well, however, as the disturbance of his constitution wore off, and though he had two or three times, during a year, some trivial returns of ophthalmy, yet they were always induced by general disorder, and rea-

dily

dily got well by measures directed to correct disorders of the alimentary canal.

That cutaneous diseases * are much connected with the state of the stomach, is generally known. Hence various medicines have been recommended to correct disorders of that viscus, with the view of removing the more evident, but consequent disease of the skin. The account, which I have given of disorders of the digestive organs, may lead to a more rational and less empirical treatment, and to the more just appreciation of the value

* It may, perhaps, be right to advert to the direct and sudden sympathy which exists between the skin and the stomach. In affections of the latter organ, the skin is dry and cold, moist and cold, hot and dry, or moist and dry; and it suddenly changes from the one to the other condition, as the state of the stomach varies. When the digestive organs are disordered, the irritable state of the skin is manifested by the effects of blisters and other irritating applications. A blister produces a tormenting local disease, and even a Burgundy pitch plaster causes extensive erythema. Indeed, when the constitution is irritable, all the modes of counter-irritation, which surgeons employ under other circumstances with success for the cure of local diseases, are likely to do harm; and thus these curative methods obtain discredit in consequence of their ill-timed employment.

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and mode of action of remedies, which are sanctioned by experience. It is almost superfluous to relate any case to authenticate so well known a fact; the following, however, may be found interesting and instructive.

A patient in St. Bartholomew's hospital had an herpetic disease of the skin. This had healed in the middle, and spread in the circumference to such a degree, that it occupied nearly the whole length of the leg, and included two thirds of its circumference. The skin had recovered a moderately sound state in the centre. The disease was propagated in the circumference by an ulceration, which threw out a projecting and firm fungus of a tawny colour, of about half an inch in breadth. A small groove or channel separated this fungus from the surrounding inflamed skin, which had not yet ulcerated. A similar disease occupied the back part of the arm; this was of an oval figure, and resembled, in every circumstance, that which I have already described upon the leg. These diseases had existed for nearly two years, and continued to spread in opposition to every

mode

mode of treatment. Mercury had been employed, even to salivation, without any marked alleviation of the local complaint. I immediately perceived that the digestive organs were greatly deranged: upon correcting this disorder; the skin surrounding the disease became pale; and all disposition to spread ceased. The fungus, however, still projected, and did not heal; it was therefore dressed with a weak solution of kali arsenicatum. This remedy seemed to subvert the diseased actions, which had produced the fungus; so that, in less than two months, the patient was discharged from the hospital perfectly well.

I have seen similar herpetic diseases, of much less extent, succeed to the absorption of matter from sores upon the genitals. These have got well when the patient has gone into the country, and appeared again when he has returned to town. They have healed under a course of mercury, and broken out again when it was discontinued.

In this review of disorders, occurring in parts

parts having a continuity of surface with the digestive organs, I have traced them from the stomach. Another set of diseases may originate from the same source. The large intestines suffer more in advanced stages of these disorders than the smaller ones; hence disorders of the rectum, and particularly many irritable diseases about the orifice of that bowel, are deducible from this cause. I shall not, however, prolong the account by the relation of cases; but content myself with assuring the reader, that the opinion has been derived from facts, and not from pre-conceived notions of the operation of such disorders.

I subjoin to this section a case, to shew how irritation in the vagina and contiguous parts may be connected with disorders of the digestive organs. Cases of considerable discharges from that canal frequently occur in children, and which I believe to depend chiefly on constitutional causes; disorder of the digestive organs induces dysury, and from the urinary organs the irritation may be communicated to the vagina.

Previous

Previous to the history of the case, I shall add a few observations as to the different meaning of the words disorder and disease, which I believe have been generally used indifferently, being considered as synonymous. When I first published these observations, I then wished to have defined these terms, and to employ them strictly according to the meaning I should attach to them; but I forbore doing it, thinking it might be construed into mere affectation. Disorder, I should define to be an unhealthy state of the feelings or functions of parts, without any apparent alteration of structure; and disease, a visible alteration in the appearance or structure of the affected part: disorder is nervous; disease is the effect of vascular actions, excited by nervous disorder: an organ may become diseased to a certain degree, and yet disorder ceasing, its feelings and functions may be natural and healthy, yet disease must have a tendency to establish disorder. That disorder alone will destroy life, is proved by numerous facts: our chief attention should therefore be directed to the tranquillizing of the nervous system, with a

view

view to prevent the occurrence of disorder, which continuing may lead to the production of disease. If, however, disease be already established, the same attention must be continued, to prevent its increase, and to relieve that nervous disorder which has produced it and is attendant upon it. Though the facts proving, that disorder alone may be fatal to the individual are not uncommon, yet I think it may be right to relate one case, to shew distinctly what kind of cases I am alluding to.

A female child, five years of age, having disorder of the digestive organs, had also discharge from the vagina and dysury; afterwards several sores formed about the labia pudendi, which were foul and fretful, and did not heal under any of the applications that were tried. The tediousness of the case induced the parents and medical attendant to wish for an additional opinion. Being consulted on the case, I suggested some unimportant alteration in the local treatment, and urged particular attention to diet, and to the regulation of the functions of the bowels and

and biliary secretion, which was extremely wrong. The sores after a little time became materially better; but the disorder of the digestive organs rather increased, when, after the child had for several days discharged nothing from the bowels but a substance resembling clay in consistence, and of a slate colour, it died suddenly of nervous disorder.

The body was very attentively examined, and though the alimentary canal was slit open throughout the greater part of its extent, no morbid appearance could be discovered; the other abdominal and pelvic viscera were alike sound in structure; the gall bladder was greatly contracted, appearing as if it had contained no bile for a considerable time; not the slightest morbid appearance could be observed in the examination of the brain, which was made with the greatest attention.

SECTION VII.

IN this section I shall mention what information I have obtained by dissection, relative to the causation of other diseases by those of the digestive organs. The reciprocal sympathy which exists between the brain and the digestive organs, is generally admitted; but the kind and the degree of the effects arising from this sympathy, is not, perhaps, in general, sufficiently understood. These organs mutually increase each other's disorder; till the affection of the sensorium leads to the greatest disturbance of the nervous functions, and even those of the mind.

All this may happen without any visible disease of the brain. Dr. Kirkland particularly directed the attention of medical men to nervous apoplexy; and the observations which have been made since his time, have proved, that not only a general derangement

of the functions of the nervous system producing apoplexy, but also partial effects of a similar nature causing hemiplegia and paralysis, may take place, without any visible change of structure in the brain. I have met with numerous instances of this kind; but could not determine whether the affections were merely nervous, or whether they were produced, or aggravated by disorder of the digestive organs. I only know, that the patients died affected by apoplexy, hemiplegia, or more local paralysis, without any derangement in the evident structure of the brain. I may also mention, that I formerly examined the brains of three persons who died in a comatose state, in consequence of the metastasis of rheumatism. In these cases no morbid appearance was observed in the brain, except some slight marks of inflammation of the pia mater. It therefore appears clearly to me, that disorder and a considerable diminution of the nervous functions may take place, without any organic affection of the brain. The perfect recovery of patients, which sometimes happens, after such disorders, may also be considered as additional

evidence

evidence of there having been, in such instances, no organic disease of the brain.

There can be no doubt but that epilepsy may in like manner take place without any morbid alteration of the structure of the brain or its membranes. Some of the persons whose heads were examined, without the discovery of any disease of those parts, had been subject to attacks like those of epilepsy. Dr. Henry Fraser has, of late, published a decisive instance in proof of this fact. A patient died of epilepsy, and his brain was examined with particular attention by Mr. Cooper, without any morbid alteration of structure being discovered *. In general, however, morbid appearances are evident in the brains of those persons who die of epilepsy. Tubercles are most frequently met with. There is, however, a disorder of structure which I wish briefly to mention, as I do not find that it has been noticed. In two persons, who died of epilepsy, I found the medullary substance of each hemisphere

* See Fraser on Epilepsy, page 39.

altered

altered from its natural structure; it had lost its natural firmness, and smoothness of surface, and appeared like thick curdled cream.

Now, if disorder of the digestive organs is capable of causing or aggravating nervous disorder, even to the production of those effects which have been mentioned, when there is no alteration of structure; it must be granted that such a state of irritation of the sensorium may lay the foundation of an excitement of the vascular structure of the brain, and thus very frequently produce organic disease. When this has occurred, it will aggravate and establish the nervous affection, and thus perhaps render it insusceptible of cure.

Such are the general observations which I have made, by means of anatomical enquiry, relative to these subjects. With respect more especially to the investigation of my present object, I have examined the bodies of six patients, in whom disease most certainly began in the abdominal viscera, and

was continued in them to the conclusion of their lives. Nevertheless the patients seemed to die rather of nervous disorder, than of disease of the parts first affected. One of the patients died affected with apoplectic symptoms, and five with hemiplegia.

In all these cases the liver was greatly diseased, and the bowels also exhibited diseased appearances. In three of the cases there was considerable inflammation of the membranes of the brain; and a good deal of water in the ventricles. In two of them no morbid appearance of the brain was discovered. I have also examined a child, who was supposed to die of hydrocephalus, accompanied by great disorder of the stomach and bowels. In this case the bowels were inflamed, the liver sound, and the brain perfectly healthy in appearance; yet there had been so great a diminution of sensation and motion, as to leave no doubt of the existence of hydrocephalus. I am aware, that great opportunities of observation, accurate attention to the history of diseases, and anatomical examination of fatal cases, are requisite to enable us

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to form just notions relative to the present subject. I thought, however, that it might not be improper to state what had been the result of my own enquiries by dissection, in order to promote a more general attention to the subject.

When my attention was first directed to the subject of sympathetic affections of other organs, caused by disorder of those concerned in digestion, my primary object was, to endeavour to ascertain, by dissection, how far pulmonary diseases originated from such a source. I have, in the course of my enquiries, had several opportunities of examining the bodies of patients who apparently died of phthisis, combined with diseases of the digestive organs. In these cases both the history and dissection tended to prove, that the chylopoietic viscera were the seat of the greatest and most established disease, and that the pulmonary affection was a secondary disorder. The liver was greatly diseased, and the lungs were also beset with tubercles; yet a considerable portion of those organs was sound. But dissections can never conclusively

 ascertain

ascertain the truth of the opinions which I have stated; for the same disposition to disease existing in the constitution may equally affect both the pulmonary and digestive organs. Nay, observations made in dissection in general, would tend to disprove the opinions alluded to; for diseases of the lungs are very commonly met with in dead bodies, while those of the liver and bowels are much less frequent. Yet considerable disorder of the digestive organs does exist, and may continue for many years, without any organic disease being apparent: it is possible, therefore, that such disorder may excite disease of the lungs, and thus produce a worse disease in the latter organs, than what existed in the former. In short, the opinions, which I have delivered, cannot be either ascertained or refuted by anatomical researches alone.

Accurate attention to the state of the digestive organs may determine this important subject, and lead to the prevention and cure of the sympathetic diseases which I have mentioned. The attention alluded to is not of that general kind, which adverts only to the

quantity

quantity of the ingesta, and the periodical expulsion of the egesta, but one that more strictly observes whether the viscera are free from irritation, and whether their secretions are healthy or otherwise. My opportunities of acquiring practical information on this subject must necessarily have been very limited; yet I have seen many cases which, to me, appeared to prove, that pulmonary irritation sometimes proceeds from disorder of the digestive organs. In cases of surgical diseases, accompanied by disorder of the digestive organs, I have also occasionally observed a cough attended with expectoration to cease, upon the correction of the disorder of those organs.

A case, which happened about five years ago, strongly impressed these opinions on my mind. A servant of mine told me, that his wife was dying of a consumption, which had been rapidly increasing for six months, and had baffled all attempts to relieve it. Thinking that I could procure her some medical assistance from the hospital, I went to see her. The case, however, seemed past hope. She was extremely emaciated; her pulse beat

140 in a minute; her face was flushed; she had a most distressing cough; and spit up more than a pint of mucus, mixed with pus and streaked with blood, in twenty-four hours. The circumstance, however, which most disturbed her was a continual purging of black and offensive matter. She told me that her bowels were first disordered; that an unhealthy state of those organs had preceded the pulmonary affection, and was indeed habitual. I thought it unnecessary to trouble my medical friends in so hopeless a case; and ordered some pills, containing one grain of opium, to be taken in such quantity as was necessary to stop the purging. As she informed me that the disorder began in the bowels, I added to each pill half a grain of calomel. By these means the purging was so much checked, that she did not find it necessary to take more than two pills in twenty-four hours; and when she had taken twelve, the mercury, very unexpectedly, affected the mouth. From that period, the stools became of a natural colour and consistence; the cough and expectoration ceased; and she was soon sufficiently recovered to go into

into the country; from whence she returned apparently in good health.

Now if it were to be ascertained, that pulmonary irritation, which might of course produce pulmonary disease, sometimes arises from disorder of the digestive organs*; it would be right to enquire further, whether it produces such effects, by the nervous disorder it occasions, and by its operation on the health in general; or by means of a more immediate sympathy existing between the pulmonary and digestive organs. I do not mean to insinuate, by what has been said, that pulmonary

* In the second part of my surgical and physiological essays, in which I related experiments made with a view to ascertain the functions of the skin, I mentioned that as it was manifest the skin and lungs were both engaged in the function of throwing forth carbonic acid gas, it followed, that when from vicissitudes of the atmosphere or weakness of the sanguiferous organs, the circulation and secretion of the skin were much diminished, the lungs would be liable to plethora, and have to perform more than their ordinary duty, which circumstances were likely to induce irritation, and perhaps consequent disease of those organs. Those experiments, as they are not of practical importance, I shall not reprint.

nary diseases do not arise originally and idiopathetically; but only to suggest that they may arise sympathetically, or in consequence of disorder of the digestive organs. The proportionate number of cases, in which they originate in this manner, can only be determined by very extensive experience. That the stomach and bowels are disordered, during the progress of phthisis, will, I conclude, be readily admitted; and that an attention to correct such disorder is requisite, must be acknowledged, from what has been said relative to the influence of such treatment upon various local diseases.

The actions of the heart seem to me also to become disordered from sympathy with the stomach. That palpitations, and feeble or intermitting actions of that organ arise from this cause, is proved by their ceasing, when the state of the stomach becomes changed. The palpitations which take place after eating, in cases where the heart is irritable, further evince the sympathy which exists between these organs. Surgeons are occasionally consulted on cases of palpitations

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of the heart, which the patients mistake for aneurisms; and I have seen many instances, where the great degree of palpitation led to a belief, that some organic affection existed. This has ceased on an amendment of the general health, apparently arising from an amelioration of the state of the digestive organs, and the patients have continued in perfect health. I have not collected any accurate narratives of the cases that I have seen; none at least which I could properly present to the public as a proof of the fact. There is nothing, however, of which I am more perfectly convinced; for I have felt it to be true in my own person. After considerable and unusual fatigue, I was seized with pain, and a sensation of coldness in the region of the stomach. I had no appetite, and the biliary secretion was suppressed. Whilst this disorder continued, which was for many weeks, my pulse intermitted very frequently, and I was distressed with hypochondriacal sensations. Upon an alteration in the state of the digestive organs, and a renewal of the biliary secretions, which happened very suddenly after taking five grains of the pil.

hydrarg.

hydrarg. my pulse became perfectly regular, and my mind tranquil.

The observations which I have made in surgical cases, lead me also to attribute many hæmorrhages, and particularly those from the nose, to a sympathetic affection of the heart and arteries, excited by disorder of the digestive organs.

If such a state of the system in general, as I have described, and which is manifested by circumstances denoting the digestive organs to be in an unhealthy state, and the nervous system to be likewise disordered, may, in some instances, cause various local diseases of parts not essential to life, the care of which custom has consigned to the surgeon; and may, in other instances, produce disorders of organs essential to our existence, the care of which is allotted to the physician; the subject must be allowed to be of the highest importance. Of late, indeed, I have been inclined to consider these circumstances as the cause of the complicated diseases which are met with in man, so much

much more frequently than in animals. In man the brain is more sensitive, and liable to be disordered by mental affections. In man the digestive organs are liable to be disordered by stimulating and unnatural diet. Sedentary habits and impure air co-operate to aggravate these disorders. The affections of the brain and digestive organs mutually increase each other; and thus a state of constitution arises, which is productive of the most general and complex diseases. But even these do not seem to me to be the most calamitous terminations of such causes. The disorder of the sensorium, excited and aggravated by the means which have been described, frequently affects the mind. The operations of the intellect become enfeebled, perplexed and perverted; the temper and disposition irritable, unbenevolent, and desponding; the moral character and conduct appears even liable to be affected, by these circumstances. The individual in this case is not the only sufferer, but the evil extends to his connections and to society. The subject, therefore, appears to me of such importance, that no apology need be offered for this im-

perfect

perfect attempt to place it under general contemplation*.

I have endeavoured to shew in the introductory observations, that a state of nervous disorder and a disorder of the digestive organs, may reciprocally produce each other; and that when both occur, they become mutually increased, and thus derange the constitution in general, so as to prove the exciting or predisponent causes of numerous dissimilar and important local affections. I shall, in conclusion, for the reasons mentioned in the preface, offer the opinions which the consideration of the foregoing and similar cases have impressed on my mind. When I find in diseases that the functions

* The ancients, who formed their judgment of the nature of disorders by observing the excretions, denominated an irritable and desponding state of mind, Hypochondriasis; and when a more fixed and irrational dejection took place, they deemed it an atrabiliary disorder, and called it Melancholia. There can be no doubt of the correctness of their observations; for if the disorder began in the nervous system, it would generally produce and become aggravated by that disorder of the digestive organs, from which they denominated it.

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of the digestive organs are impaired and disturbed, I consider this disorder, as the cause or effect of a more general derangement of the system at large. When it seems to be the cause, and when it can be speedily corrected and removed, then the relief and cure of those local diseases which may have taken place, is in many instances so sudden and surprizing, that I think it impossible to consider the disorder of the general health and the local disease, in any other relation but that of cause and effect.

The cure of local diseases by means that cannot be supposed to act otherwise than by correcting errors in the functions of the digestive organs, incline me to differ in opinion from those who consider the local diseases alluded to, as the effect of impurity of the fluids, and to coincide with others, who consider them as the result of general irritation, frequently induced by that of the abdominal viscera.

When I see the same local diseases removed by the same means, though more slowly,

I do

I do not wonder at the tardiness of the cure; and perceiving that the amendment of the local disease is proportionate to that of the health in general, I feel warranted in forming the same opinion as to the mode in which the cure is effected. When I see local diseases disappearing and re-appearing as the constitution in general is tranquil or disturbed, I feel confirmed in my opinion concerning their origin.

If the actions of any part of the body be excited and increased by accidental causes, it may reasonably be inferred, that in a state of health they will be simple and common, unless the stimulant be of a peculiar nature; but if the actions be specific and diseased, we may naturally conclude that the cause of their becoming so is constitutional. The occurrence of similar local diseases in different parts of the body, furnishes an additional proof that the cause of such diseases is constitutional.

It must indeed be very difficult to ascertain the causes of the peculiarities of local

diseases; but when I see such a variety of them cured, sometimes suddenly, by means which tend only to tranquillize and invigorate the constitution, I become confirmed in the opinion that a similar state of health may lead to the production of dissimilar local diseases.

I have further observed with respect to this subject, that persons who have been out of health, but with no other distinguishable errors in their constitutions than such as I have described, I mean nervous weakness and irritation, with a marked disorder in the functions of the digestive organs, have been liable to a succession of dissimilar local diseases. In such instances, I have seen in succession enlargements of absorbent glands, boils, rheumatic affections of joints, and dysury: yet all local diseases have ceased as the health became re-established, by attention to correct the disordered functions of the digestive organs. I have seen also in the same patient enlargements of absorbent glands, rheumatic disease of a joint, and an eruptive disease of the skin, which have

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all equally got well as the general health improved, by similar medical attention. Nay, the continuance of local diseases in some instances, after the disorder of the constitution has been relieved or cured, does not in my opinion invalidate the foregoing conjectures respecting their origin. Local diseases, however induced, may have become established by habit, or continued from that state of disorder into which they have reduced the part that they have attacked. A local disease, however excited, may, as we know from experience, be of such a nature as that its actions never cease, and as we have not succeeded in curing. I allude to cancer, which occurs, in conclusion, in such constitutions as I have endeavoured to describe.

It has been said, that I have been hasty in drawing these conclusions. Yet, as may be seen in my first publication, I mentioned, in speaking of disorder of the digestive organs as exciting or aggravating nervous irritation, and thereby causing local diseases, it followed that the nervous irritation might exist, and produce disease, without this usually exciting cause.

cause. I then, too, brought forwards instances of local diseases produced by local causes, in order to establish our opinions of the independent nature of local diseases. I further remarked, that constitutions disposed to local diseased actions, might naturally be supposed to be liable at the same time to a manifest disorder of the nervous system and of the digestive organs; and from thence, as I observed, might have arisen that connexion between local disease and general disorder, which I have so continually remarked. I likewise added, that though the cases related naturally suggested an opinion, that there is some constitutional cause for the production of local diseases, they appeared to me insufficient to prove it. After having, however, drawn the opinions which I offered from a very considerable number of cases, and having been solicitous to state both sides of the question as fairly as I was able, that the reader might judge of it for himself, I trust no imputation of haste can properly be attached to my conduct. In my own opinions I place very little confidence; yet

 it

it is impossible to avoid forming them, and I think it proper to relate them, for the reasons which have been stated in the preface.

That such opinions as have been delivered in the four paragraphs preceding the last, are deduced from a partial, though most commonly presenting view of the subject, I now readily repeat; because I have seen instances of local diseases, in which I could not trace any disturbance of the nervous system, or of the digestive organs, apparently adequate to their production. With respect to some of the striking cases which I have related, wherein the suddenness of the cure made it, I think, evident that the local disease was the effect of nervous disorder, induced by that of the digestive organs; it may be further enquired, how is it possible, that a similar cause should produce such various effects? Is it because a state of weakness and irritation having occurred, those local diseases ensue, to which there is a predisposition in the constitution? And

are we to consider the general disorder of the system, as the exciting or predisponent cause of the local disease?

Granting it were ascertained, that local diseases generally arise from disturbance of the constitution at large, and consequently, (as it has been my chief object to state,) may be most readily and effectually cured by measures which tranquillize or invigorate the constitution, still it would be very improbable, and contrary to common observations, to suppose that local diseases might not arise without any material constitutional disturbance.

Though I am strongly impressed with the opinion, that the primary causes of local diseases are, in general, such as I have represented, yet I think it probable, that there may be adjunct circumstances at present but little understood, which by their cooperation lead to the peculiarity of such diseases. In our present state of knowledge, therefore, I think it better to consider the disturbance of the system in general, as

 merely

merely the exciting cause of local diseases. With this view of the subject, the cases recorded shew how suddenly local diseases are frequently cured, when the exciting cause is removed; how generally they decline in proportion as the exciting cause is diminished: and thus they indicate how they may be prevented by a timely attention to mitigate and remove that cause.

It may not be improper further to state the opinions which I have formed respecting the origin of diseases of particular organs, and which may be considered as local diseases, though they are not generally alluded to when that term is employed. If we may be able to trace the origins of diseases of the absorbent and salivary glands, of the breast and testes, to constitutional causes, why may we not reasonably expect that similar circumstances may produce diseases of the lungs, liver, and kidney? It seems to me improbable that so complex a structure as the human body, should be so correctly formed, as that every part should possess its due proportion of vessels and nerves, en-

dowed with an exact degree of natural and relative strength; or in other words, that there should be no such thing as comparative weakness or irritability of the different organs of the body, such as should predispose them to disease.

We may therefore account rationally, and in conformity to acknowledged facts, for the production of diseases in vital organs, by supposing, that a state of general weakness and irritability being induced, the naturally weak parts suffer in the greatest degree, and in consequence they most readily become the subjects of disease. But when diseases of vital or other organs occur, it is probable that another cause contributes to their production; that is, the sympathy which each organ has with the disorders of another. If, then, the organ thus sympathetically affected be naturally disposed to disease, its structure may be irremediably spoiled in consequence of vascular actions, excited through the medium of nervous irritation. If this opinion be correct, it is highly important, as the medical indication in this case is to remove the

the exciting cause, and our attention becomes directed to an organ in which perhaps there is but little manifestation of disorder, or if there be, which is likely to be overlooked when the attention is so forcibly attracted to an apparently far greater evil *.

* See the case beginning at page 229.

On ANEURISMS.

The exposure of a portion of an artery, and tying it in order to stop the current of blood into an aneurismal sac, as proposed by Mr. Hunter, may be said to have been a new operation, at least in modern surgery. It is not therefore surprizing that errors were at first committed in the mode of performing it. The hæmorrhages which took place after the operation in the first cases in which it was performed, arose from the ulceration of the artery that had been tied. The vessel in these cases was laid bare and detached in some degree from its surrounding connexions, and the middle of the detached portion was tied by a single ligature. An artery thus circumstanced must necessarily inflame; which it would do in different modes and degrees, accordingly as the state of the constitution, or of the part was more or less healthy; and this inflammation produced the ulceration of the vessel.

The occurrence of hæmorrhage led some surgeons to adopt a practice which cannot but be considered as injurious. They applied a second ligature above the other, leaving it loose, but ready to be drawn tight if the first should not answer. The second ligature, however, must not only keep a certain portion of the artery detached from the surrounding parts, but must also give additional irritation to the inflamed vessel; and on both these accounts it is more likely to make the inflammation end in suppuration or ulceration.

The mode of performing the operation for the aneurism, which Mr. Hunter's judgment and experience taught him to adopt, was to expose and disturb the artery as little as possible, and after having tied it to bring the surrounding parts into contact with it again. Though an experienced and skilful operator may accomplish this object with very little disturbance of the artery from its natural situation and connexions; yet I cannot but suspect that surgeons in general may not be so successful, especially in cases where, from

from the deep situation of the vessel, the surrounding it with a ligature depends more on feeling than on sight *. Also, though when the artery is sound and the constitution healthy, ulceration may not ensue, even though the artery is in some degree separated from its surrounding connexions, and tied by a single ligature; yet it is surely proper to guard against those circumstances which tend to produce its ulceration. As large arteries do not ulcerate when they are tied upon the surface of a stump after amputation, it occurred to me that it would be right to tie them, in cases of aneurism, as nearly as possible in the same manner and under the same circumstances. The large vessels on the surface of the stump continue to possess all their natural surrounding connexions,

* It can neither be considered as a compliment to Mr. Home, nor an affront to any other surgeon, to suppose that no one can perform the operation for an aneurism after Mr. Hunter's method better than he does. Yet in a series of cases published in the Second Volume of the Transactions of a Society for the Promotion of Medical and Chirurgical Knowledge, hæmorrhage from ulceration of the artery appears to have been a frequent occurrence.

whilst

whilst they are left in a lax state, in consequence of their division.

To accomplish this object in cases of aneurism, I propose that the operation should be performed in the following manner: — The operator should divide the immediate coverings of the artery, till he has fairly exposed its surface. When he can touch the bare vessel, he will not, I believe, find any difficulty in separating from it, by means of his finger and thumb, or the blunt edge of an aneurismal needle, the cellular substance that connects it to the contiguous parts. This part of the operation is not painful and should be performed slowly. The firm sides of the vessel enables the surgeon clearly to distinguish its surface, and by keeping the finger in exact contact with it, a passage may be made completely round the artery. Care should be taken not to elevate the artery more than can be possibly avoided, because the artery would be stretched in its longitudinal direction by so doing; and care should also be taken not to injure the contiguous veins or nerves. When the operator

operator has thus gently insinuated his finger between the vessel and its surrounding connexions, so that an inch of its surface is every where exposed, two ligatures may be put under it, one of which is to be carried upwards, and the other downwards, as far as the artery is detached, and then tied as firmly as possible. The artery should then be divided by a probe-pointed bistoury in the interspace between the two ligatures, but nearer to the lower ligature than to the upper one.

In my opinion, large arteries should always be tied with moderately thick ligatures, because we may then draw the noose as tightly as possible, without apprehension of cutting or tearing the coats of the vessel, or of breaking the ligature. The latter occurrence would in many cases prove a very embarrassing circumstance, and it might be very injurious on account of the jerk communicated to the artery to a considerable distance. Also, when an artery is tied with a thick ligature, the compression made by it is not so great as to produce a speedy mortification and separation of the end of the vessel, so

that

that the ligature remains, in general, a fortnight before it is detached, and therefore, time is allowed for the consolidation of the sides of the vessel prior to its separation *.

When

* Doctor Jones, whose numerous and accurate experiments have thrown much light upon the natural means by which hæmorrhages are suppressed, thinks that the ligatures should be round and firm; because such cords are most likely to cut the internal coats of the artery. I am solicitous that they should be strong and moderately large; because as far as I have remarked, large ligatures remain longest on the arteries before they are detached; and in examining the stumps of patients who have died after amputation, I have frequently seen the sides of the artery unclosed, even though the ligatures have fallen off from them.

Though ligatures when applied to the principal arteries of amputated limbs are scarcely ever known to slip or become projected from their situation, yet it has been apprehended that such an occurrence might take place in cases of aneurism, from the greater determination of blood into the arteries of the limb in such cases. To obviate such an effect, Mr. Henry Cline suggested the following method of securing the ligature in its situation. His suggestion was adopted by Mr. Cooper, who thus describes the operation in which it was instituted:

"An incision being made on the middle of the inner part of the thigh, and the femoral artery exposed, the artery was separated from the vein and nerve and all the surrounding parts, to the extent of an inch, and an eyed probe armed with a double ligature, (each cord of which

was

When an artery is thus tied, in cases of aneurism it possesses its natural surrounding connexions and support, and is left loose, in consequence of its division. It appears, indeed, in most respects similarly circumstanced to an artery tied upon the surface of a stump, and as I never knew hæmorrhage from ulceration of the vessel take place after the operation for aneurism, when it was accomplished in this manner, I cannot but continue to practice and recommend this method of securing the artery. That the operation for the aneurism will succeed when only a single ligature is employed has been proved by experience; but as hæmorrhages, independent of ulceration of the artery, so frequently arise from an inflammatory action of the vessels,

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was armed with a needle,) was conveyed under the artery and the probe cut away. The ligature nearest the groin was first tied; the other was separated an inch from the first and tied also; then the needles were passed through the coats of the artery, close to each ligature, and between them; the thread they carried was tied into the knot of the ligatures which had been already secured around the vessel: and thus a barrier was formed in the artery, beyond which the ligature could not pass." See the first number of the Eighth Volume, of the Medical and Physical Journal.

every

every thing tending to produce a tranquil state of the wounded parts cannot but deserve to be put in practice, and the relaxation of the artery by its division must, I think, contribute to this effect.

The cases of aneurisms which I am about to recite, are not, however, intended to illustrate any mode of conducting the operation, but merely to shew the powers which nature possesses of carrying on the circulation, and maintaining the limb in its pristine state of vigour and strength, even though so large an artery as the external iliac may have been tied, and thereby rendered impervious.

CASE I.

Feb. 1796.—James Lindsey, aged thirty-four, about a year ago perceived a swelling beneath the calf of his right leg; and soon afterwards, whilst walking, he suddenly felt he said, "as if he had been struck on the part "by a cannon ball," the pain being so great that he could not move for several minutes. The pain, however, gradually abated; but the swelling of the leg had continued to increase

since

since that time. The whole calf was now lifted up by a quantity of blood effused beneath it. The muscles appeared thin, and were so extremely tense as to occasion great pain, accompanied with considerable erysipelas of the whole leg; so that a speedy ulceration and sloughing, or sudden rupture of the distended part, was hourly to be dreaded. Under these circumstances, tying the artery above the aneurism, was the only means of relieving the patient from his present suffering, and of preserving him from sudden death. But what was particularly discouraging, both to the patient and surgeon, was the discovery of another aneurism, situated in the femoral artery of the opposite limb. No preternatural pulsation, however, could be felt in any other part of his body.—The operation was performed by Sir Charles Blicke in the following manner:—An incision about three inches in length was made through the integuments of the middle of the thigh, so as to expose the inner edge of the sartorius muscle and the fascia covering the artery, which was divided to the extent of somewhat more than an inch. The artery was separated from its con-

connections for one inch of its length. Two ligatures were put under it, and firmly tied, and the artery was divided in the interval between them. The lips of the wound were then brought together by slips of sticking-plaster. This patient's limb was for some time much colder than the other, and nearly three days elapsed before it had regained its natural degree of warmth; but the tension, pain, and erysipelatous inflammation quickly subsided. The divided integuments united above and below the ligatures, but not between them; and there was also a large discharge from the wound: which circumstance was probably owing to the state of the patient's constitution, which was much reduced in point of strength. This man, however, did not complain of the least throbbing, tension, or pain in the wounded part; and this entire exemption from the sufferings of other patients, I could not but attribute to the division of the artery. The upper ligature came away on the tenth, and the lower on the fifteenth day; after which the wound healed gradually, though very slowly.

About

About five weeks after this operation, the aneurism in the opposite thigh was almost ready to burst; the tumour having acquired a pyramidal form, and the skin covering the apex having yielded so much as to form a kind of process from the tumour. Indeed the integuments at this part were so thin, that we every hour expected them to give way. The aneurism was situated so high, as to make it probable that the disease extended above the place where the arteria profunda is sent off. The patient had hitherto refused to submit to the operation; but on reflecting that if the tumour should burst in the night, he must perish unless the bleeding vessel could be immediately secured, he consented to let me tie the artery in the groin, whilst we had day-light and proper assistance. The tumour approached so near to the groin, as to prevent us from compressing the artery against the bone; for, in attempting this, the compress occupied the place where the incision ought to be made, and our endeavours to make a compression still higher were ineffectual; they weakened, but did not interrupt the pulsation of the tumour. As

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the artery was so imperfectly compressed, hæmorrhage took place during the operation, which, though not dangerous to the patient, proved extremely embarrassing to the surgeon; for in attempting to lay bare the fascia of the thigh, I divided, by the very first incision, so many small arteries supplying the inguinal glands, and also so many veins, that the blood which was poured forth, completely filled the space made by the incision, and overflowed the sides of the wound. The application of the sponge, the usual resource on these occasions, was of no avail; for the wound was instantly filled again, so that the whole operation was to be done upon parts covered with blood, where the only guide in its performance was the feeling. I did indeed see some exposed inguinal glands, and found that I had divided two of them in trying to get at the fascia of the thigh. As soon as I could distinctly feel this part, I made a small opening through it, and introducing my finger, I divided it upwards as far as Poupart's ligament, and downwards as low as the aneurismal sac would allow me. The pulsation of the artery now served as my guide. Laying aside,

aside, therefore, all surgical instruments, I made way with my finger in a perpendicular direction, till I could touch its coats, and then, with my finger and thumb, separated it from its connections, so as to be able to grasp it alone between them. I then passed two ligatures under it by means of an eyed probe, and drawing one of them upwards, and the other downwards, as far as the space would permit, I tied them firmly. The upper ligature was about half an inch from the os pubis, and the lower one the same distance from the arteria profunda, which vessel I had distinctly felt before I tied the ligatures.

There are, perhaps, few situations of aneurism where the artery can be tied so separately and distinctly as here; the pulsation directs the surgeon to the precise situation of the vessel; and if he only keeps sufficiently close to its sides when he passes the ligature round, neither the vein nor the nerve can be included. I did not divide the artery between the two ligatures; it was suggested that it were better not to do so; and I knew that I could obtain all the advantages of a relaxed

 state

state of the vessel, by merely bending the thigh upon the pelvis. The patient did not, after the operation, suffer any kind of pain from the wounded parts; which, I think, shews, that the artery did not inflame much in consequence of the ligature. The suppuration was moderate, and every thing relative to the wound went on as well as could be expected. The limb, and particularly the foot, was colder than that of the opposite side; but in about three days, it gradually acquired its natural temperature; and it all along retained a perfect state of sensibility, which I considered as a proof that it was sufficiently nourished. To prevent the heat from being carried off faster than it was generated, the limb was wrapped in flannel; but I avoided the application of any artificial warmth, lest its stimulus should prove injurious, by exciting action when the powers of life in the part might have been considerably diminished.

The blood in the aneurismal sac did not appear to have coagulated before the operation; for the bulk of the tumour could be greatly

greatly lessened by pressure, whenever the patient would allow the attempt to be made, so that I conclude the limb had received a considerable quantity of blood through the femoral artery, until that vessel was tied. The tumour diminished greatly after the operation and the blood contained in it became coagulated. This reduction of the swelling, I think, was owing to a considerable part of the blood passing onwards through the femoral artery: and I regretted afterwards, that, at the time of the operation, I had not endeavoured to press all the blood from the aneurismal sac; which experiment would have shewn how far it was fluid or coagulated.

Every thing, with respect both to the state of the limb, and the patient's general health, went on well till the fifteenth day, when the upper ligature separated, and the blood gushed in a full stream from the open extremity of the vessel. This fortunately happened during the attendance of the surgeons at the hospital, and the bleeding was stopped by pressure until their arrival. The stream of blood which flowed upon any remission or

wrong application of the pressure, was so large, that we did not dare to remove the patient even from the bed on which he lay. Mr. Ramsden undertook, in this situation, to prevent the further escape of blood from the vessel, whilst I proceeded to tie the artery above Poupart's ligament. Accordingly, I first made an incision, about three inches in length, through the integuments of the abdomen, in the direction of the artery, and thus laid bare the aponeurosis of the external oblique muscle, which I next divided from its connection with Poupart's ligament, in the direction of the external wound, for the extent of about two inches. The margins of the internal oblique and transversalis muscles being thus exposed, I introduced my finger beneath them for the protection of the peritonæum, and then divided them. Next, with my hand, I pushed the peritonæum and its contents upwards and inwards, and took hold of the external iliac artery with my finger and thumb, so that I was thus enabled to command the flow of blood from the wound. It now only remained that I should pass a ligature round the artery, and tie it; but

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this required caution, on account of the contiguity of the vein to the artery. I could not see the vessels; but I made a separation between them with my fingers. Having, however, only a common needle with which to pass the ligature, I several times withdrew the point, from the apprehension of wounding the vein *. After having tied the artery about an inch and a half above Poupart's ligament, I divided that part, and thus laid the new and the former wound into one. I traced as well as I could with my finger, the continuation of the artery, from the place where the ligature was now made, to that where it was formerly applied. I wished to have divided the artery, and to have

* It would be, I think, an useful addition to our surgical instruments for such purposes, to have needles made with handles of pure, and consequently, flexible silver, and with steel points that have edges just sharp enough to pass through the cellular substance; but neither so pointed nor so sharp, as to endanger the wounding any parts of consequence that may be contiguous to those round which they are passed. When the points of these instruments were once passed underneath the vessel, the surgeon could bend their handles so as to accommodate them to the space they have to turn in, and thus avoid an inconvenience which, I believe, most surgeons must have experienced; I mean, the great difficulty of turning a common needle in a deep and narrow wound.

suffered it to retract behind the peritonæum: but I found it so attached to the surrounding parts, as to render such division difficult, and perhaps not advisable.

The lips of the wound were brought together with sticking plaster, and one suture only was made, opposite to the natural situation of Poupart's ligament. The peritonæum was pressed back into its place, and the protusion of it restrained by bringing together the integuments with straps of sticking-plaster.

No perceptible alteration occurred in the state of the limb after this second operation; but the patient's health was considerably reduced, by his having suffered from the complaint nearly twelve months, by having undergone three operations, and by the loss of a considerable quantity of blood. No adhesion took place between the divided parts; the edges of the wound were open and sloughy; the wound was painful, discharged a great deal of pus, and was so extremely tender, that he could not bear it to be touched.

touched. Still no greater mischief appeared till the fifth day after the operation, when a hæmorrhage of arterial blood took place in such quantity, that there was no doubt but that it arose from the principal artery: though the ligature with which it was tied still remained firm. The patient's health was now so impaired, and his weakness so great, that an attempt at tying the artery still higher up, would have appeared like torturing him without any hopes of ultimate success. The wound was therefore cleansed and dressed; some compresses were applied upon it, and bound down by the spica bandage. By this treatment the hæmorrhage was stopped; and the attendants were ordered to make a pressure on the bandage if any fresh bleeding should occur. The compresses were renewed for three succeeding days; and though occasionally the wound bled, yet it was not profusely, or in such quantity as to destroy the patient: his strength, however, gradually declined; a troublesome cough occasioned extreme pain in the wound, and in the course of the eighth day after the last operation, he died.

Dis-

Dissection.

No marks of disease were discoverable in the aorta, or in the internal iliac artery. The external iliac was covered by a great number of lymphatic glands, which prevented it from being readily distinguished; yet, when separated from these, it did not appear diseased. For nearly two inches above the part which was tied, the lymphatic glands covering the artery were considerably enlarged, having no doubt become additionally swollen from the irritation excited by the ligature. The external surface of one of them next the wound, had ulcerated; and the ulceration penetrated through the gland, and communicated with the artery, as was afterwards made evident by slitting open that vessel. It was through this aperture that the blood had escaped; for the ligature still remained firm upon that part of the artery which it had inclosed. From this ligature to the place where the vessel had formerly been tied, the artery was so closely connected with the surrounding substance, that dissection was required to separate them. The parts of the artery from

which

which the former ligatures had separated, were about half an inch asunder, and the canal of the vessel appeared perfectly open.—The whole of the vessels from the bifurcation of the aorta, to the aperture in the tendon of the triceps muscle, were now removed, and carefully dissected; and after being stuffed, and hardened by spirits, they were cut open to shew the state of them internally. A coagulum of blood, about two inches long, was found above the part where the last ligature was made. At what time this coagulum had been formed, is perhaps difficult to ascertain; it did not seem to have taken place after death, for above it the artery contained no blood; and if it had occurred immediately after the operation, it is probable that it would have prevented the hæmorrhage. I have already remarked, that the man did not bleed for some time previous to his death; in which interval, perhaps, this coagulum had been formed.—The ulcerated opening from the artery through the diseased gland, admitted the passage of a moderate-sized bougie. The ligature, which still firmly inclosed the artery, had brought its sides

sides in contact, so as to render it probable that they would have united. All the other parts of the femoral artery were quite open, so that a large bougie could be passed from the lower end of it, through the aneurismal sac, to the place where the ligature now remained. About half an inch of the artery was wanting, which had been, as it were, cut out by the ligatures in the first operation. The sides of the arteries below the part which was tied were thicker than natural, and their internal surface was rough, and of a yellowish white colour. The arteria profunda was filled with coagulated blood, and had become reduced to less than the natural size. The sides of the artery of the opposite limb had firmly united at the part where it had been tied. No coagulum was found in it, and it had not diminished in size in any remarkable degree above the part which was closed.

It may be enquired in this case, why the artery did not heal, but upon the separation of the ligature remained widely open. That the ligature was tightly applied is, I think, evident

evident from its suppressing all hæmorrhage till its separation on the fifteenth day. I am inclined to attribute the want of union in the artery to its unhealthy state, which opinion is confirmed by the dissection, which shewed that even the lower orifice of the artery had not healed, whilst the artery in the other limb which was tied much further from the aneurism, and where the vessel was more likely to be sound and healthy, had become firmly united. The event of this case would induce me to tie the artery as remotely from the seat of aneurism as could with propriety be done.

In this first operation of tying the external iliac artery, I was urged to perform it by the impulse of the moment, for the death of the patient would otherwise have been inevitable. In this case I thought, I disturbed the peritonæum too much, and tied the artery higher than was necessary. As the limb, however, did not appear to suffer materially, I felt it a duty to perform a similar operation in the following case. The vessel was tied lower down, so that it was brought into view at

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the time of the operation. It was tied with two ligatures and divided in the interval; it afterwards firmly united at each extremity, and the ligatures came away at the usual time: neither did there appear any deficiency in the nutrition of the limb. These circumstances afford reasonable expectations of success in future operations of this kind, yet in the present instance the operation appeared to have been too long delayed, and the patient to have died from an event which was not foreseen, but which might perhaps have been prevented.

CASE II.

——— Wrungel, a German, by trade a sugar-baker, of a sickly aspect and slender make, about 5 feet 7 inches high, and near 40 years of age, was admitted into St. Bartholomew's hospital, on account of an aneurism in the femoral artery, close to Poupart's ligament. This he imputed to a strain about three weeks before. The tumour at the time of admission was of the size of a small orange, and the blood contained in it was fluid; for it could be entirely expressed from

from the aneurismal sac. At a consultation on the treatment of this case, I said that I did not think a surgeon warranted in tying the external iliac artery, till he was in some measure compelled to it by the progress of the disease, for the following reasons. 1st. An aneurism, in proportion to its increase and duration, obstructs the passage of the blood through the natural and principal channels, and obliges it to circulate by other courses, which are enlarged according to the exigency of the case. It seems highly probable, that in proportion to the size of the artery which is tied, and the magnitude of the part to be nourished after that operation, so will be the degree of previous enlargement in these collateral channels, which is necessary to ensure its success. On this account the operation should be delayed longer in an inguinal aneurism than in any other.

2dly. The operation of tying the external iliac artery must, in the present state of our knowledge, be considered as very serious in its nature, and uncertain in its event. I had then only once tied this vessel when a man would

would otherwise have bled to death from the femoral artery; and though the limb was nourished, the artery ulcerated. The operation was done a second time in London, and the limb mortified; but no fair practical inference can, I am told, be drawn from the latter case, as the operation was postponed till mortification was as it were impending.

3dly. There is some chance in aneurisms of a cure spontaneously occurring from the closure of the artery above by the coagulation of the blood. To cite those instances only which have come within my own knowledge, and which it seems right to mention, as it increases the stock of facts before the public; I have known such a spontaneous cure take place twice in the popliteal artery, once in the arteria profunda femoris, and once in the axillary artery. For these reasons it was agreed to postpone the operation in the case of the present patient till circumstances should appear to demand its performance*.

Our

* There was about twelve months ago a soldier in the York hospital, who had an aneurism of the femoral artery, but

Our poor patient therefore lay in the hospital during two months, in which time his disease

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but the external tumour had so much overlapped Poupart's ligament, and interposed itself between the integuments and the fascia of the external oblique muscle, as to render an operation very difficult, if not impossible. In this case the integuments mortifying, occasioned a simultaneous coagulation of the blood in the artery, for though the coagula came out, yet there was no fresh hæmorrhage, and the patient recovered.

Since the preceding edition of this book, I have seen two other cases of the spontaneous cure of aneurisms; one was in the external iliac artery, and the aneurismal sac formed a large tumour within the abdomen, extending as high as the umbilicus and across the belly as far as the linea alba.

In the other case I conjecture that the aneurism was in the common trunk, which gives rise to the right cephalic and subclavian portion of the brachial artery. The pressure of the aneurismal sac had caused the absorption of the ribs beneath the clavicle, so that the tumour presented itself so exactly in the situation of the axillary artery that I believe most surgeons would at first sight have supposed that the tumour, which was as large as a large fist, and beat vehemently, to have been an aneurism of that artery; yet when the subclavian artery was pressed above the clavicle, the pulse at the wrist was stopped, without lessening the pulsations of the aneurism. The patient had come to London, supposing that some operation might be undertaken for his relief.

disease gradually increased, and his health declined. Towards the latter part of the time he suffered a great deal of pain in the front of his thigh, which deprived him of rest, and the whole limb was largely œdematous. These symptoms would naturally arise from the pressure which the aneurism must make on the anterior nerves and absorbents of the thigh. The tumor had advanced towards the surface, and the skin had become slightly inflamed, yet the protruding part of the tumour was not of greater extent than

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relief. His digestive organs were disordered, and his heart throbbed violently against his side. I recommended him to live on as spare a diet as he possibly could, observing to him that by keeping his vessels in a state free from plenitude, he was most likely to lessen that forcible action of the heart which caused the increase of his disease, whilst at the same time the same measures would tend to insure the complete digestion of every portion of aliment he received into his stomach, and thereby improve the state of his digestive organs. I urged him also to regulate the functions of the other viscera concerned in digestion. I heard that about six months afterwards he was very well, and lately upon inquiry was informed that he was as well as at any period of his life.

when

when he was first admitted into the hospital, and no judgment could be formed of that part which was more deeply situated, on account of the general swelling of the thigh. The blood could even now be expressed from the prominent part of the tumour, and I felt anxious, lest the obstruction to the circulation in the main artery should not have been sufficient to have obliged the blood to circulate by other channels. It deserves to be remarked, that the aneurism may extend considerably beneath the fascia of the thigh, causing pain and œdema by its pressure, and yet that part which advances towards the surface may be of no great magnitude.

The patient's sufferings increased considerably during the week preceding the operation, so that he declared his present state was almost insupportable, and solicited that something might be done to change it either for the better or the worse. He never, however, was able to explain the cause of this uncommon degree of anxiety and inquietude.

The operation was undertaken on Saturday the 24th of October. An incision of three inches in length was made through the integuments of the abdomen, beginning a little above Poupart's ligament, and being continued upwards; it was more than half an inch on the outside of the upper part of the abdominal ring, to avoid the epigastric artery. The aponeurosis of the external oblique muscle being thus exposed, was next divided in the direction of the external wound. The lower part of the internal oblique muscle was thus uncovered, and the finger being introduced below the inferior margin of it and of the transervalis muscle, they were divided by the crooked bistoury for about one inch and a half. I now introduced my finger beneath the bag of the peritonæum, and carried it upwards by the side of the psoas muscle, so as to touch the artery about an inch above Poupart's ligament. I took care to disturb the peritonæum as little as possible, detaching it to no greater extent than would serve to admit my two fingers to touch the vessel. The pulsations of the artery made it clearly distinguishable from the

the contiguous parts, but I could not get my finger round it with the facility which I expected. This was the only circumstance which caused any delay in the performance of the operation. After ineffectual trials to pass my finger beneath the artery, I was obliged to make a slight incision on either side of it, in the same manner as is necessary when it is taken up in the thigh, where the fascia which binds it down in its situation is strong. After this I found no difficulty in passing my forefinger beneath the artery, which I drew gently down, so as to see it behind the bag of the peritonæum. By means of an eyed probe two ligatures were conveyed round the vessel; one of these was carried upwards as far as the artery had been detached, and the other downwards: they were firmly tied, and the vessel was divided in the space between them. Nothing further remained than to close the external wound, which was done by one suture, and some strips of sticking-plaster. The threads of the upper ligature were left out of the wound above the suture which closed its edges, and those of the lower beneath.

A few remarks on this operation may be permitted. To divide the parietes of the abdomen, push aside the peritonæum, and tie the external iliac artery by the side of the psoas muscle, is an operation more formidable in sound, and on its first proposition, than it is in reality. It is performed almost without shedding blood, so that the principal circumstances of it are very evident. When I formerly performed this operation, I was urged to it by immediate necessity: I tied the artery much higher than in the present case, disturbed the peritonæum in a greater degree, and, contrary to my own principles, I did not divide the artery. In the present case, having time to deliberate upon the steps of the operation, I detached merely so much of the peritonæum as enabled me to reach the artery, as far as I conveniently could above Poupart's ligament; but not so far as to make it difficult to ascertain that I surrounded the artery only with my finger, without injuring any of the adjacent parts, nor so far but that I could draw down and distinguish the artery which I included in the ligature. The remembrance of the swelling in the external

iliac glands, and of the ulceration of the artery in the former case, led to this difference of conduct.

The poor man was greatly exhausted by the operation, and his leg. which had been chilled by exposure during the operation, continued very cold for a long time afterwards. It was wrapped up in flannels, to prevent the dissipation of its own heat; but I would not apply any artificial warmth to restore its temperature lest it should act as a stimulant.

He could not compose himself after the operation, nor did he sleep during the night, so that on the following day his state was very unpromising. His pulse beat 160 in a minute, his tongue was covered by a dark brown fur; he looked agitated, and a purging took place, which was not restrained till the following night by a cordial and opiate mixture. Respecting his pulse, it is proper to mention that it beat 120 most days in the week preceding the operation.

His thigh was as warm as that of the sound side, his leg cooler than the opposite one, and his foot many degrees colder. He had, however, perfect sensation in his toes, and power of moving them. The leg and foot were rubbed with oil three or four times a day, in order to prevent any stagnation in the veins, and to diminish perspiration. It was well covered as before by flannels.

On Monday, the 2d day (Oct. 26.) the pulse was less frequent: he had slept a good deal during the night, and seemed stupified by the opium; but was on the whole so little better, that I concluded he would gradually sink in consequence of the shock of the operation. The temperature of the limb was a little increased. The man however took bread and milk and other food in moderate quantities, whenever it was offered to him: the purging having ceased, the quantity of the opiate was diminished. He rather improved in the evening, and rested well during the night; so that on (Oct. 27.) the third day after that of the operation, every circumstance wore a favourable aspect. His pulse did not exceed

100, and was moderately firm and full; his appetite had increased: the temperature of the limb was a good deal augmented, so that his foot was scarcely colder than that of the sound side; and the œdema of the limb was considerably diminished. I now dressed his wound, in which he had not complained of pain, nor of any tenderness, when the surrounding parts were compressed. The incision appeared but as a line, except at the neighbourhood of the ligatures, where it was a little open, and from whence there issued a moderate quantity of as healthy pus as I had ever seen. The surrounding parts were perfectly natural both in appearance and sensation. On the fourth day (Oct. 28.) he was still better: his pulse 90; his appetite good; his sleep sound; and his limb lessening in size, and increasing in warmth. The students at the hospital had dressed the wound before my arrival, and reported that the discharge was tinged with blood.

On the fifth day (Oct. 29.), he was still better, his pulse being but 80 when I counted.

counted it. The wound and contiguous parts looked remarkably well, but a bloody sanies was discharged, which I felt unable to account for.

On the sixth day (Oct. 30.) the state of his health and limb continued as well, if not improving. The bloody discharge however had increased in quantity, insomuch that it ran through the coverings of the wound and soiled the bed; it had also become fœtid. From the first occurrence of this bloody discharge I felt considerable uneasiness respecting it. I could not believe that a healthy wound would secrete such a sanies, and I felt apprehensive lest the wound should spread from disease. Nothing however took place to confirm this idea. It seemed probable also that if the aneurismal sac were not entire, some of the blood being exposed to the air might tinge the discharge from the wound, and grow putrid. I frequently pressed on the tumour, but could press no blood from the wound. In this state of uncertainty it was, however, pleasing to observe, that

that the patient's health continued in every respect better than could reasonably have been expected.

The circumstances of the case remained very much the same during the seventh and eighth days after the operation. On the morning of the ninth (Nov. 2.) when I came to the hospital, I met Sir Charles Blicke, who told me that the poor German was dying; intelligence which equally surprised and shocked me.

He was indeed in a dreadful state, appearing like a man far advanced in typhus fever. His pulse was 150; his tongue covered with a brown fur; his intellect wavering, and the action of his muscles tremulous. On examining the wound, with a view to discover the cause of this great and sudden alteration, and pressing on the tumour beneath Poupart's ligament, I forced out a great quantity of blood, rendered fluid and highly fœtid by putrefaction, insomuch that it instantly blackened the probe with which it accidentally came in contact.

The

The cause and circumstances of the bloody discharge were now made clear; the surface of the exposed coagulated blood of the aneurism had at first tinted the discharge from the wound, and then had, by gradual dissolution, been more plentifully commixed with it, and given it a degree of putridity. Till, however, the whole mass had become putrid, and had been converted in consequence into a fluid, it could not be forced out from beneath Poupart's ligament when pressure was made on the tumour; nor did it till that period excite inflammation in the surrounding parts by its acrimony, or derange the constitution by its absorption.

After entirely expressing the putrid blood I washed out the cyst with warm water, till it returned untinged. The relief which was by these means afforded to the poor man was very striking and considerable. His pulse became moderate, his intellect clear; he had some refreshing sleep, and again took food in moderate quantities. On the following day, when the integuments beneath Poupart's ligament were compressed, a considerable quantity

quantity of fœtid discharge and air were forced out. It was not however at all tinged with blood, and appeared to me to be merely the secretion from the cyst which had contained the blood. I directed that this discharge should be pressed out, the cavity syringed, and a poultice applied three times a day; but finding a considerable quantity of fetid fluid still lodged in the cyst, I thought it right to make an opening into it beneath Poupart's ligament, to afford it a more ready exit. No abatement in the quantity, or alteration in the quality of the discharge, was however remarked; it seemed to be such as a sloughing sore commonly furnishes.

This fever came on on the evening of the eighth day (Nov. 1.) after that of the operation; and I am convinced it would have speedily destroyed the patient, had not the cause been detected and removed. The powers of his constitution rallied again; his pulse was firm, and often not more than 100; he took sufficient food, and slept moderately well. But the part, as has been said, did not go on well, and seemed to prevent any

increase

increase of strength. For a week I was not without hopes that some favourable change might happen, but afterwards I lost all such expectations, as his already much reduced powers were still further declining; nevertheless, he held out more than another week, when he died on November 16, the twenty-third day after the operation. A few days before his death both ligatures came away with the dressings.

Dissection.

A very slight adhesion had taken place between the sigmoid flexure of the colon and that part of the peritonæum which was opposite to the wound, but there was no other appearance of that membrane, or of the bowels, having suffered any inflammation in consequence of the operation. The peritonæum was separated from the loins, and from the posterior half of the left side of the diaphragm, by a considerable collection of blood, which extended downwards to Poupart's ligament, and communicated under that ligament by a small aperture with the aneurismal sac.

This

This opening was situated in the direction of that crevice which is found between the internal iliac and psoas muscles. The only rational explanation that can be given of the formation of this collection is, that the blood had burst its way from the aneurismal sac in the vacancy between the muscles just mentioned; after which it would readily and extensively separate the peritonæum in the manner described. I am inclined to attribute to this circumstance the undefinable disturbance of health which the poor patient suffered during the week preceding the operation. It may, perhaps, excite surprise that this collection did not become putrid.

No particular account can be given of the aneurismal sac beneath Poupart's ligament, since it and the contiguous parts had sloughed in consequence of the irritation of the putrid blood. A small aperture had been made by this sloughing in the front of the orbicular ligament of the hip joint, and a small extent of the thigh bone was, by the same cause, deprived of its periosteum.

A bougie

A bougie was passed from the lower end of the femoral artery into the sac.

The extremities of the external iliac artery, which had been divided in the operation, were united together by a firm new-formed substance; the sides of each extremity were perfectly closed, and a small plug of coagulated blood was found in each.

Having thus given as brief an account as I am able of the circumstances of this case, as they appeared to me, I cannot conclude without mentioning the observations of others, particularly as they may assist in suggesting rules of conduct for future operations on similar cases. It has been said that the irritation of the aneurismal bag was probably a spontaneous occurrence, and not the effect of the acrimony of the putrid blood. But the suddenness of this attack, the manifest existence of a cause sufficient to produce it, and the total absence of such an occurrence in all other cases of aneurism, render this supposition highly improbable.

It

It has also been imagined that part of the discharged blood might have returned from the lower end of the artery. This latter opinion is very improbable, since, after the complete removal of the blood, none returned by that channel: and in the first case which I have related, none returned by the inferior part of the artery, though the area of it was still of its natural dimensions, and unobstructed. This latter observation had tended to diminish my confidence in the powers of the communicating channels, and made me wish to defer the performance of the operation as long as possible. It seems evident that in the present instance it was too long delayed.

It would be desirable in future to perform the operation before an extensive diffusion of blood had taken place; indeed, could the adequateness of the collateral arteries for the supply of the limb be established, it would be proper to operate at an early period of the disease.

It deserves to be considered whether, in cases where it is probable the blood is become diffused, it might not be right at the time of the operation to open the aneurismal bag, and remove the blood. I should, however, be inclined to postpone this attempt; for, perhaps, no necessity might exist, as putrefaction might not take place. A few days will determine the degree of life of the limb, and would make a wound less likely to ulcerate or slough. Should signs of the putréfaction of the blood ensue, or the probability of such an occurrence become evident, I should think it necessary to make a small opening into the aneurismal bag for the removal of the contained blood. This being done, if no blood came from the lower orifice of the artery, there would be no necessity for tying it.

CASE III.

Jane Field, aged 40, who had been in the habit of drinking to excess, was admitted into St. Bartholomew's Hospital, with a very large

large femoral aneurism, reaching as high as Poupart's ligament. The whole limb was œdematous, but in no very considerable degree. She was quite incapable of using the least exercise, or of sitting upright; and even in bed, she suffered continual pain, which was much aggravated during the pulsation of the aneurism. The pain was so violent as to preclude sleep. She had no appetite; her pulse was feeble and frequent, generally exceeding 100; but her tongue was not furred; and her bowels were regular.

On Saturday, 11th October 1806, the operation was performed in the same manner as in the last case. An incision, about three inches in length, was made through the integuments of the abdomen, in the direction of the artery, beginning just above Poupart's ligament. Having divided the skin and aponeurosis of the external oblique muscle, I introduced my finger between the margin of the internal oblique and transverse muscles and the peritonæum. I then divided their lower edges upwards, in the

 direction

direction of the external wound, to the extent of an inch and a half, with a probe-pointed bistoury. Having thus made room for the admission of my finger, I put it down upon the artery, felt its pulsations, and gently insinuated it beneath the vessel; and then, with the aneurismal needle, passed under it two moderately thick ligatures, carrying them upwards and downwards, as far as the detachment of the artery permitted, and tying them as firmly as I could. I next divided the artery in the interval, but much nearer to the lower ligature than to the upper one. The wound was afterwards closed, in the middle by a ligature, and in other parts by sticking-plaster. Upon removing the patient to bed, she complained of great pain in the wound, and in her head; and was very restless and ungovernable. She wished for something to procure sleep, and I gave her twenty-five drops of laudanum. This, instead of having the desired effect, made her much more restless; she was continually changing her position in bed, and complaining of violent headach. At night she became more tranquil. The one foot was

*7 much

much colder than the other; but the limbs at the knees were nearly of an equal temperature.

Sunday, 12th, I visited her early in the morning, and found that she had been moderately quiet during the night; that she had suffered much pain in her foot, but none in the wound. The pain in the limb she described as having first attacked the thigh, next the leg, and afterwards the foot, which last pain had now ceased. The foot was warmer than it was the preceding evening, and in a state of perspiration: it was four degrees of heat lower, by Fahrenheit's scale, than that of the healthy limb. The superficial veins of the leg were filled with blood. Her pulse was 96. She had no appetite. I left her with a promise to visit her again at night, recommending her to lie quiet, and take some simple nourishment. About noon, one of the dressers, observing that her skin was hot, and the tongue dry, gave her some saline medicine, with a small quantity of antimonial wine, which occasioned vomiting, and such con-

 tinued

tinued nausea, that she refused all kinds of food. The limb, at night, continued in the same state as in the morning. She was free from pain; her pulse 120. As she was without an evacuation, I gave her a pill, containing two and a half grains of *pil. aloet. e myrrh.* with the same quantity of extract of colocynth, ordering it to be repeated in the morning, if necessary.

Monday, 13th. The foot was nearly of the same temperature with the other. She had had two stools, and felt much more comfortable. Still, however, she had an aversion to all kinds of nourishment. Her pulse was 150 and 160, at different times of the day. I may here mention, that every subsequent day, she had one or more stools, without having recourse to opening medicine; and whenever she was more irritable or disturbed than usual, she had a tendency to purging. In the evening of this day, I inquired if she had a wish for any particular kind of nourishment; and, at her suggestion, gave her half a pint of porter, with some ginger and toasted bread. This seemed to agree with her

stomach,

stomach, as she slept the whole night, and awoke much refreshed the next morning. Her tongue was then clean; she took some tea and muffin for breakfast, and broth and bread, in moderate quantities, in the course of the day. Half a pint of porter was allowed her at dinner and supper. Her pulse this day (Tuesday) was 95. The foot warmer than the other. The wound was dressed for the first time; it appeared well closed, and discharged but little. Wednesday, pulse about the same number; had slept during the night, but not so soundly as on the preceding one. The wound and contiguous parts were tender; there was a considerable discharge, which was fetid; the lower ligature came off the artery. The artery, as I have mentioned, was divided very near to the lower ligature; and it is probable, that, in the restlessness of the patient subsequent to the operation, the motions of the limb had drawn the artery from out of the ligature*.

Thursday,

* I have never made use of the expedient suggested by Mr. Henry Cline, for securing ligatures upon arteries, since

Thursday, The wound very tender, and the skin had inflamed very much; pulse 84.

Friday, The discharge from the wound less in quantity, and more puriform; pulse the same in number, but very feeble.

Saturday, The patient had been seized in the middle of the night with severe headach and shivering, and in the morning she could eat no breakfast. Her tongue was rather

since I never felt its necessity; and because I have always thought it right to tie a large artery with so thick a ligature, that it would have been unsuitable to the practice which he has recommended. One advantage arising from tying a large artery with a thick ligature is, that it may be drawn as tight as possible, without apprehension of cutting the vessel, or of its speedily coming off from it. Should I, in any future instance, think it right to oppose any mechanical obstacle to the ligature's coming off the vessel which it encircles, I should do it in the following manner. Having tied a large knot at one end of a small thread, I would pass it, by means of a common sewing needle, through the middle of the artery, in front of the ligature which encircles it; I would then form a second thick knot on the thread, close upon the surface of the vessel. These two knots would, I think, present a considerable obstacle to the slipping of the circular ligature from off the end of the artery.

dry,

dry, and slightly covered with a brown fur; pulse 95, and feeble. Half a pint of wine was allowed her in sago, in addition to the porter; and she took the *infus. menth. vitriol.* of the hospital, with some tincture of gentian.

Sunday, She was much better; tongue moist and clean, and her appetite much improved. She disliked the bitterness of the medicine, peppermint-water was therefore substituted for the common mint-water, and the tincture of gentian was omitted; pulse 82; skin cool.

Monday, In the same state as yesterday; granulations appeared in the wound below the ligature, which closed it in the middle. This part of the wound is now about an inch in breadth, and a third more in length, The wound above the ligature about one fourth of an inch across; and the new flesh, by which it is united, of a tawny colour, and flabby texture. The surface of the skin, to a considerable extent from the wound, red and excoriated.

Tuesday,

Tuesday, She had a return of headache, with loss of appetite; her pulse 96. There flowed from the wound a considerable discharge, of an offensive smell, and seemingly irritating to the skin over which it passed. She complained of having had a restless night; and observed that, in general, she found herself well or ill, as the preceding night had passed comfortably or otherwise. Thinking it probable that the irritable state of the wound might contribute, in a great measure, to prevent her from sleeping, I dressed it with an aqueous solution of opium, and smeared the excoriated skin with lard, to prevent the acrimonious discharge from affecting it. All appearance of granulations in the wound had vanished. I ordered her fifteeen drops of laudanum in her night draught; and, instead of the *infus. menth. vitriol.* I gave her *dococt. cinchon.* ℥ij with ʒj of *tinct. card. comp.* every four hours.

Wednesday, She had a comfortable night, with much sleep; her pulse 80. The wound greatly amended. The discharge puriform,

less fetid, and smaller in quantity. The new flesh above the ligature florid; and granulations appeared again on the sides of the wound, below the ligature. The same treatment was continued.

Thursday, She had not rested so well, and complained of headach. The wound, however, was rather better than on the preceding day. I cut out the ligature which closed the wound in the middle, thinking it might tend to keep up irritation. She attributed the pain in her head to the opium she had taken; to ascertain this point, I ordered the dose to be increased to twenty-five drops.

Friday, She had slept well, and was free from headach; her pulse under 80. This day, the ligature, from the upper part of the artery, came away with the dressings. The excoriated skin had healed; the redness was inconsiderable. The wound, in every part, had a healing appearance. It seems unnecessary to detail particularly the subsequent part of the case. She was kept in bed to the end

end of the third week, when she was allowed to sit up, that her bed might be made. I thought this caution requisite, from knowing that ligatures are detached from arteries before the sides of the vessel are united. I also confined her to bed during the whole of the fourth week; but advised her to move the limb about frequently. The wound healed like a healthy wound; and was nearly closed in a month after the operation. During the third week, when the wound no longer proved a source of irritation, her pulse did not exceed 75 strokes in a minute; it was generally lower, and once I found it to be only 68. At the expiration of the month, she got up daily, and walked about the ward; although, on her admission into the hospital, she was incapable of walking at all. There was not the least œdema of the limb. Its circumference, at the calf, was but one third of an inch less than the opposite side. Having walked many times the length of the ward, she became tired, and thought that the limb which had been operated on, felt more fatigued than the other. The aneurismal tumour remains at this

time

time of a considerable size. It is certainly more than one third less than at the time of the operation. I have related the case thus particularly, in order that the reader may judge of it for himself. To me it appears, from this and the former cases, that, in an advanced state of femoral aneurism, the artery may be tied above Poupart's ligament, with as little detriment to the circulation of the limb, as in other cases of aneurism, where the operation is attended with very constant success. The symptoms immediately subsequent to the operation, appear to me to have arisen entirely from the irritable and weak state of the patient. She had pain in the head from the operation; and so she had afterwards, whenever her health was disordered by irritation. Her pulse, prior to her taking the medicine which acted as an emetic, was 96; but the subsequent day it was 150 or 160. This appears to be the result of the state of the stomach, for that becoming tranquil, the pulse was again reduced to 95 or 96. In a constitution so weak and irritable, a wound was not likely to heal kindly; and all the subsequent cir-

cumstances

cumstances of the case are satisfactorily explained, as the effects of an irritable wound, acting upon an irritable constitution. Upon the wound becoming healthy, at the expiration of a fortnight, all variations of the constitution ceased. I cannot, therefore, but consider the perplexing circumstances that succeeded the operation, as the effect of the patient's peculiarity of constitution, and not as arising from the operation itself, or from the state of the limb consequent to such an operation. A similar operation has lately been performed by Mr. Frere, of Birmingham, with success. The patient being healthy, the wound healed without difficulty.

Mr. Tomlinson, of Birmingham also, performed a similar operation with equal success, so that it seems proved that the external iliac artery may be tied, in the case of a femoral aneurism, with as little detriment to the limb, as occurs from tying the femoral artery in a case of popliteal aneurism. I lately saw the woman who was the subject of the last case which I have related; and there

there is no distinguishable difference in the size or strength of the two extremities.

CASE IV.

J. Peterson, a Swedish sailor, about forty years of age, was admitted into St. Bartholomew's hospital, on account of an aneurism of the femoral artery, just below the groin. He was a thin man, but had strong muscles. He had a languid appearance; and his pulse was small and feeble; his appetite, according to his report, moderate, and bowels regular; his tongue, however, was much furred. As the upper and most prominent part of the aneurismal tumour was ascending above Poupart's ligament, so as to make it probable, that if it increased it might overlap the ligament, and render the operation difficult, delay was inadmissible, and the operation was performed on Saturday, 25th February 1809. It was accomplished as in the preceding case. I put my finger behind the peritonæum, and clearly distinguished the cylindrical form, and firmness of the artery; but I could not perceive

perceive its pulsation. I pressed on the vessel, and the beating of the aneurism ceased; I remitted the pressure, and it was renewed. Having thus ascertained that I had my finger upon the artery I tried to separate it, so as get my finger round it; but I could not succeed. I then tried with the point of the aneurism needle, carrying it close to the artery from without, towards the cavity of the pelvis; but the vessel yielded so considerably, that I did not accomplish it. I tried in a contrary direction, and though the artery receded from its situation, as I think, fully half an inch; yet by perseverance I accomplished my purpose. I then passed another aneurismal needle, threaded with a double ligature, through the track that I had made, and tied each ligature firmly. I have related these circumstances, that the reader may know why the artery was not tied as it was in the preceding case. I could not bring the artery into view. I might have done so lower down nearer to Poupart's ligament; but the apprehension of producing any communication between the air and the blood of the

aneurismal

aneurismal bag, which might occasion its putrefaction, made me tie the artery at some distance above the ligament. The recession of the artery in this case, before the pressure made by the aneurismal needle, was so considerable as to excite my surprise.

The patient lay upon his side with his thigh bent upon the pelvis, and for the first three days after the operation without pain, or any apparent disturbance of his constitution. He was fed with bread and tea, and bread and broth, and his bowels were regular. The wound seemed closed by adhesion, except at its lower part, where the ligatures came out. On the fourth night, he was seized with violent and distressing pain in the epigastric region, and on the left side of his chest; he had not the least sleep, and felt very anxious and disturbed. His pulse beat the next day 130 in a minute; his skin was hot and dry, his face flushed, and his tongue covered with a dry brown crust. Two grains of calomel were given to him, and effervescing saline draughts were taken

 every

every four hours. The calomel produced a purging stool during the night, which had not a drop of bile in it. The following day his pulse exceeded 100 only by a few strokes, his skin felt temperate, his tongue was moist, and not so brown or incrusted. His pain, also, was much diminished, though the epigastric region was still tender. His saline draughts were continued, and he was directed to take five grains of the pilul. hydrarg. each night. The next day he was still better; his pulse 90, his skin moist, and his tongue cleaner; he took food without disgust, though not with much appetite. As he had no evacuation from his bowels, a little opening electuary was given him, and the saline draughts were changed for the infus. menth. vitriol. with a little tinct. cardam. He had a stool in the night, which was of a light ochre colour; that is, a light brown, which dilution would not convert into a yellow. He continued the same medicines till the tenth day after the operation, with an evident amendment in his health; though the alvine discharges which we

 con-

contrived to procure daily, were still of the colour above described, though somewhat deeper.

On the tenth day, after observing his tongue and pulse, &c. those who saw him, joined with me in opinion, that he was in better health than when he was admitted into the hospital.

During this constitutional disturbance, the upper part of the wound became open, and the discharge was offensive and irritating, and excoriated the skin over which it flowed. I therefore greased it with fresh lard at each dressing, to prevent as much as possible the discharge from acting upon it. Some swelling of the parts on that side of the wound next the ilium also took place. Still there was nothing very materially wrong, and the state of the wound gradually amended as the patient's health became tranquil.

On the tenth day, the ligatures came away, and then the patient first complained

 of

of a pain on the inside of his thigh, just above his knee.

On the eleventh day he repeated his complaints, and said that the pain disturbed him, and prevented his sleeping during the night. I knew not to what to attribute it; I thought it might indicate some irritation of the anterior crural nerve; however, as the patient remained pretty well, I gave no directions respecting it.

On the twelfth day, when I visited the patient, I was shocked at his appearance. His countenance expressed great anxiety and despondency; and his pulse was more than 120. His tongue was covered with a brown fur. He had missed his regular evacuation from the bowels. Being clear that the calomel had been of essential service before, I gave him two grains of that medicine, and ordered again the effervescing draughts.

On the thirteenth day, he was no better; but more languid. The calomel had produced

duced two copious loose stools, scarcely tinted with an ochre colour. I requested Dr. Roberts to see him, who directed him to take a grain of opium at night; ordered him sago and wine for food; and the infusion of carcarilla with tinct. of columbo.

Fourteenth day, he neither seemed better nor worse; he had slept four hours in the night. A slight blush of the skin appeared on the inside of the thigh, such as indicates inflammation of the absorbing vessels. Fomentations and poultice were directed to this part. Dr. R. also ordered half a grain of calomel, with five of cicuta, to be taken night and morning.

Fifteenth day, he was considerably better, though his leg continued painful; the pain however was diminished. He was directed to continue the same medicines; and to insure a good night, if one grain of opium failed to give him rest, he was allowed to take another after four hours.

Sixteenth day, Not quite so well. He had had no evacuation for the last twenty-four hours. He took a little opening electuary.

Seventeenth day, He had a stool during the night, and was better. His thigh was œdematous but not painful. The pain was descending towards his ancle. Dr. Roberts wished him to take the blue pill in preference to the calomel. Five grains were therefore given each night.

Eighteenth day, He was better, and continued gradually to improve till the twenty-fourth day, when he declared he felt quite well, and had had six hours comfortable sleep. The colour of the stools had been gradually improving, and on that day, when such a marked amendment took place, the stool might be said to be nearly properly tinctured with bile, and of a proper consistence.

During this time an abscess had formed on the inside of the thigh, a little above the

knee,

knee, where the absorbents of the limb began to inflame, and the matter had been discharged by a puncture made with a lancet. Swelling in the ham likewise took place, and was apparently caused by the irritation of the absorbents in that part, but no matter formed in it, and the leg also became œdematous. The wound made by the operation had healed firmly and all tumefaction about it had subsided. As the patient's bowels acted regularly, no medicines were now given him.

After about a week had elapsed, he was seized as before with pain in the epigastric region, rheumatism in the right shoulder, and inability to move the right arm. His countenance again expressed despondency and disturbance; his pulse was frequent and his skin hot; the abscess also was painful and discharged copiously, and became distended with matter, so that it seemed necessary to enlarge the aperture, which had nearly healed. His tongue was much furred, and his stools had no bile in them.

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He again took calomel at first, and afterwards the pilul: hydrarg: and the secretion of bile was gradually renewed and increased, as in the preceding instances, which produced a proportionate amendment in his general health. His limb also was so much improved as to enable him to walk about the ward, and to go out occasionally into the air.

Believing that living in a better air would greatly contribute to the restoration of his health, he was soon afterwards discharged from the hospital; looking as well as he did on his admission, and capable of walking with but little infirmity. He was advised to take the pilul: hydrarg: every second night, till the secretion of bile was right, and to take them afterwards whenever he perceived it to be deficient or faulty. He was also enjoined to keep his bowels regular in other respects.

The cases which I have related and referred to, shew that the current of blood through the external iliac artery may be stopped, without

without occasioning any material, or even evident diminution of the powers of the limb. It also appears to me that this operation does not disturb the constitution, in a greater degree, than a similar one performed upon arteries of less magnitude. It is true, that considerable disorder of the constitution took place in the cases which I have related, but it seemed to have arisen from the peculiarities of the state of health of the patients, and not as a necessary consequence of the operation. In the last case, every thing went on favourably till a disorder of the digestive organs occurred. To such disorder, it cannot be doubted that there was a strong pre-disposition; and of which, the operation by its effects on the mind as well as the body, confinement in an hospital, and great alteration of diet may be considered as the exciting causes. I think it probable that the state of the constitution might have greatly contributed to produce the general irritation of the absorbents of the limb, which was first observed on the day when the ligatures came away. I cannot doubt but that the inflammation

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of these vessels did, as indeed it generally does, greatly disturb the constitution and aggravate its disordered state. These conjectures appear to me to be verified by the last occurrence which I have related. When the wound was healed, and the limb so well as that it probably could impart no irritation to the general system, from leaving off the mercurial medicine, disorder of the digestive organs recurred and produced the effects which I have described.

That the femoral aneurism, when it occurs near to the groin, may, like other aneurisms, sometimes be cured by the processes of nature, is proved by experience; yet this is not likely to be the common event of such cases. I knew two instances of patients dying of hæmorrhage from such aneurisms. The sufferings both of body and mind, in these cases, were shocking. The patients were unable to move, and the distension of the integuments, and pressure on the nerves occasioned great pain and irritation. The patients also lay apprehensive and uncertain of the hour when their

sufferings might be terminated by a fearful and fatal hæmorrhage. I think myself therefore fortunate that I was first, as it were, compelled to perform an operation, which, I trust, may be found to diminish the sufferings, and preserve the lives of those afflicted with this disease.

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